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ABSTRACT

This booklet contains institutional capability profiles on the 17 educational laboratories and R&D centers primarily supported by the National Institute of Education, Department of Health, Education, and Welfare. Each institution presents its capabilities in terms of mission, programs, resources, staff, and facilities. The original university-based research and development centers were created under provisions of the Cooperative Research Act of 1963. The regional educational laboratories were funded under provisions of the Elementary and Secondary Education Act of 1965. These institutions maintain multidisciplinary staffs and specialized facilities for conducting research, development, evaluation, and training. Many of the institutions have a substantive mission focus (e.g., reading, school organization, and vocational education). Others have strong regional ties. Their expertise spans early elementary through adult education and basic research through product development and dissemination. All have experience performing both small-scale projects and large, multi-year programs. Although funded largely through contracts administered by NIE, the institutions also perform work for other federal, state, and local agencies. Additional funding sources include foundations, industries, and foreign countries. Further information can be obtained by contacting the director of each institution. (Editor/MB)

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INSTITUTIONAL PROFILES OF EDUCATION LABORATORIES AND R. & D. CENTERS

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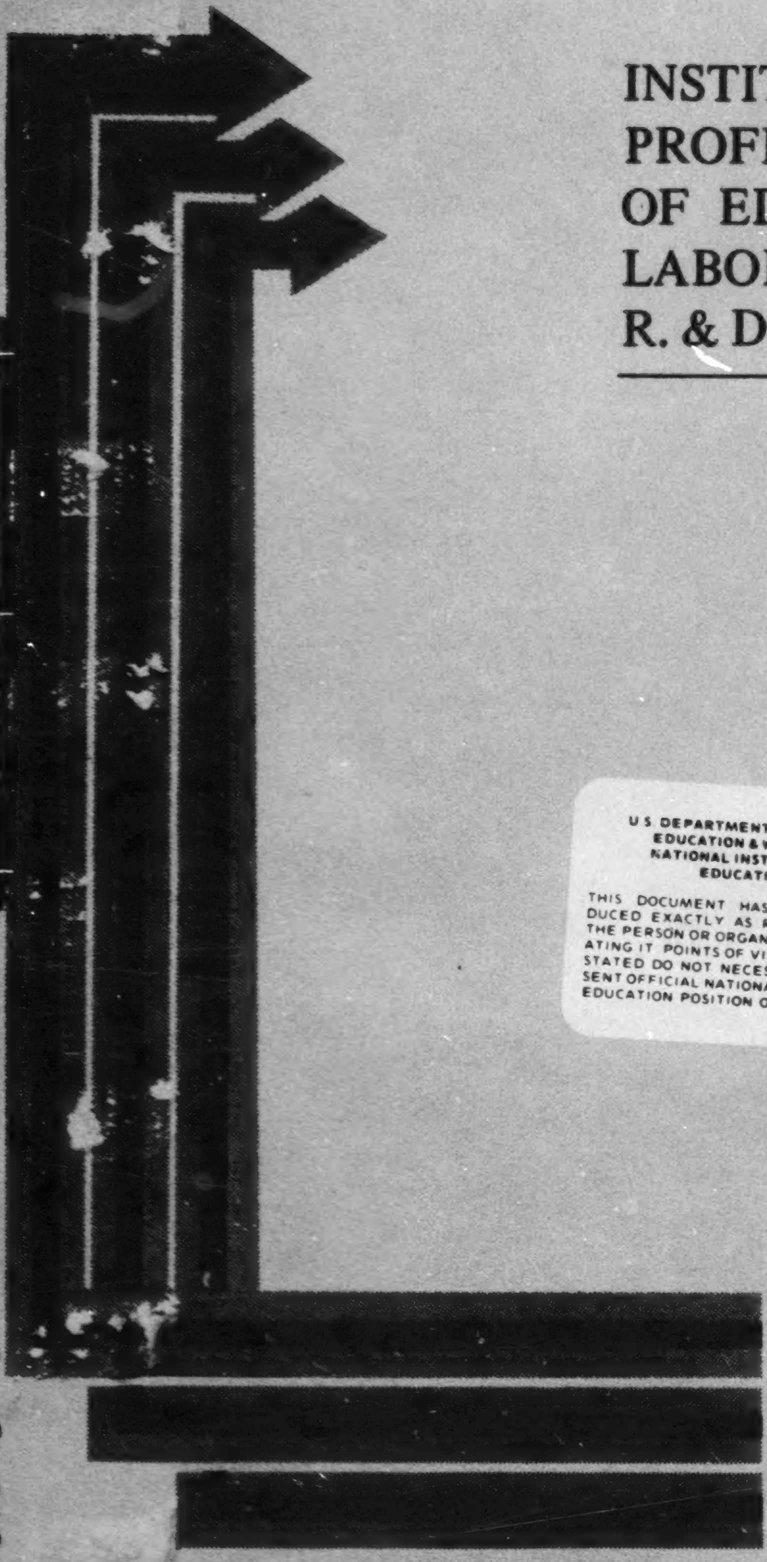

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INSTITUTIONAL PROFILES OF EDUCATION LABORATORIES AND R.& D. CENTERS

SEPTEMBER 1976

TASK FORCE ON LABS AND CENTERS

NATIONAL INSTITUTE OF EDUCATION
UNITED STATES DEPARTMENT OF HEALTH, EDUCATION & WELFARE

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INTRODUCTION

This booklet contains institutional capability profiles on the 17 educational laboratories and R. & D. centers primarily supported by the National Institute of Education, Department of Health, Education, and Welfare. Each institution presents its capabilities in terms of mission, programs, resources, staff, and facilities.

The original university-based research and development centers were created under provisions of the Cooperative Research Act of 1963. The regional educational laboratories were funded under provisions of the Elementary and Secondary Education Act of 1965.* These institutions maintain multidisciplinary staffs and specialized facilities for conducting research, development, evaluation, and training. Many of the institutions have a substantive mission focus (e.g., reading, school organization, and vocational education). Others have strong regional ties. Their expertise spans early elementary through adult education and basic research through product development and dissemination. All have experience performing both small-scale projects and large, multiyear programs.

Although funded largely through contracts administered by NIE, the institutions also perform work for other Federal, State, and local agencies. Additional funding sources include foundations, industry, and foreign countries.

Agencies needing work performed in the areas of educational research, development, evaluation, or training will find this booklet a helpful reference listing of experienced contractors. Further information can be obtained by contacting the director of each institution.

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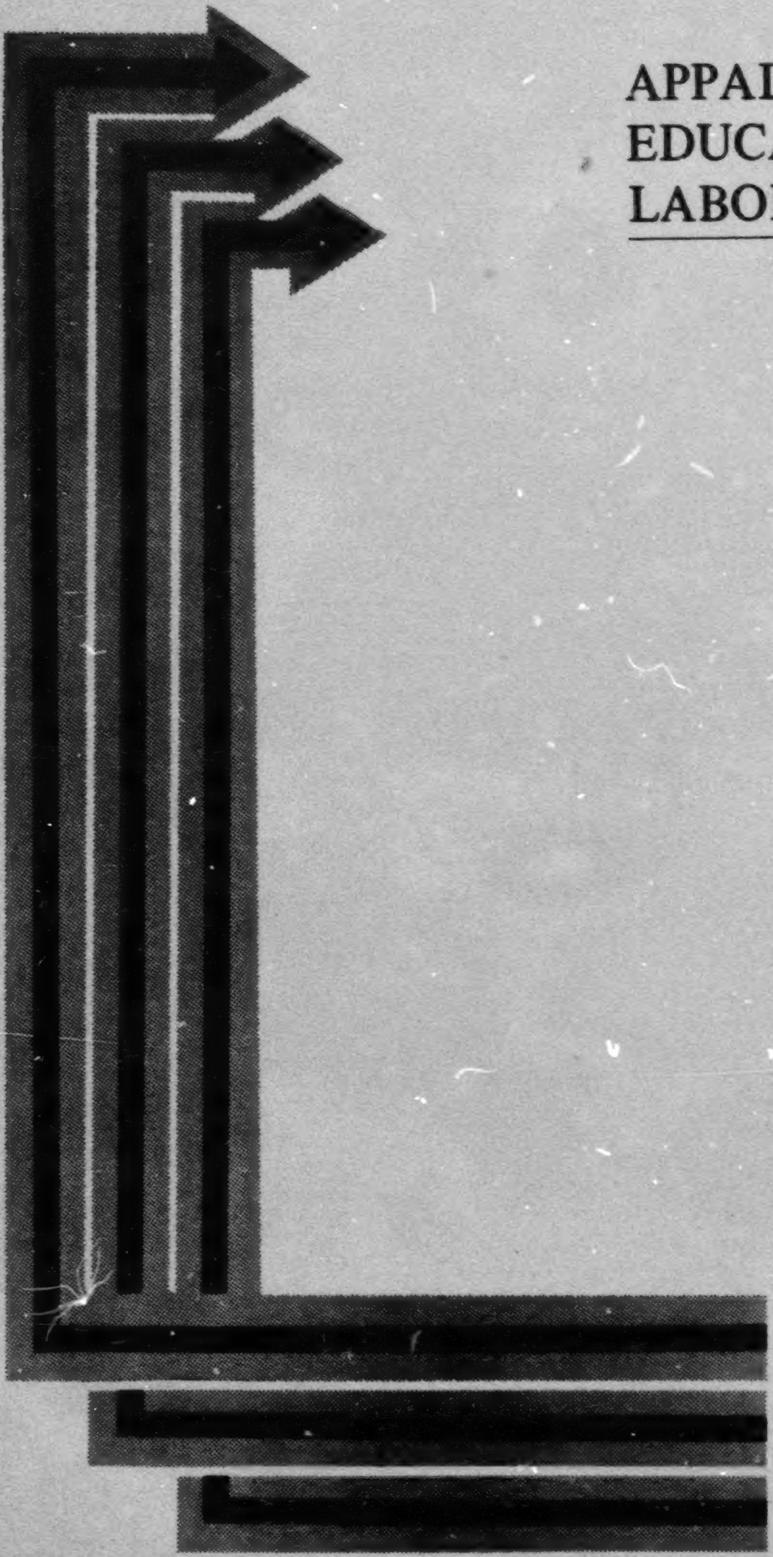
*The Center for Vocational Education was established under provisions of the Vocational Education Act of 1963 and its 1968 amendments.



APPALACHIA EDUCATIONAL LABORATORY, INC.

Terry Eidell

1031 Quarrier Street, P.O. Box 1348
Charleston, West Virginia 25325

(304) 344-8371

APPALACHIA EDUCATIONAL LABORATORY, INC.

Mission

The Appalachia Educational Laboratory (AEL) has as its specific mission improving education and educational opportunity in the Appalachian region. This mission is based on two assumptions: (1) Improved educational practices can help the people of Appalachia improve their quality of life, and (2) educational practices can be improved through educational research and development. The laboratory serves the Appalachian region by performing major projects based upon needs assessments, providing that information to its constituents, serving as a communication link among States through the AEL board of directors, creating a Consortium of State Departments of Education in the Appalachian Region, and relying on advisory groups for regional input.

The laboratory seeks to lessen the impact of economic hardship and rural isolation in Appalachia by developing innovative educational programs to meet specified needs of the region. An initial needs assessment was conducted early in the laboratory's development and this study is periodically updated through formal and informal assessment procedures. Programs are developed to meet these special needs. For example, an early AEL project, the Educational Cooperative program, sought to assist small school districts in voluntarily combining their talents and resources to more effectively and economically meet common demands. The laboratory's Home-Oriented Preschool Education (HOPE) program was designed specifically for isolated nonurban preschoolers. Career education, high on the list of needs, is the subject of two AEL projects--Career Decisionmaking (CDM) and Experience-Based Career Education (EBCE).

Initially, the laboratory limited its work to major research and development projects which would provide products and/or processes to alleviate some of the most seminal problems common to education in the Appalachian region of its member States. As AEL has reached institutional maturity, the focus of its work has been broadened in two ways. First, AEL now provides direct research, evaluation, development, and dissemination services to State and local education agencies (SEA's and LEA's) throughout its member-State area. Second, AEL has expanded its area of specific concern and operation to all areas of the seven participating States, thus extending its mission to encompass educational concerns found in both the Appalachian and non-Appalachian areas of its member States.

Needs characteristic of the Appalachian region also have been identified to exist elsewhere. AEL products spawned initially out of a regional need have been found to meet needs across the Nation. All projects have been presented to and/or used by audiences throughout the United States. The CDM materials have been field tested in Oregon, Utah, California, Washington, Alabama, Kentucky, New York, Idaho, West Virginia, Tennessee, and Ohio. School systems in New York, Iowa, West Virginia, Georgia, and Louisiana have implemented AEL/EBCE projects. Products resulting from development of the HOPE project are in use in Illinois, Ohio, Idaho, Tennessee, West Virginia, Oregon, Kentucky, Missouri, South Carolina, Alabama, North Carolina, and Pennsylvania. Audiences in Pennsylvania; West Virginia; Washington, D.C.; and South Carolina have viewed and provided evaluative reactions to the Television for Effective Parenthood test show.

Several AEL products await imminent national dissemination. The CDM materials are scheduled to be published in January 1977, by McKnight Publishing Co., of Bloomington, Ill. The Home Visitor Training Package, from the Marketable Preschool Education (MPE) program, is being placed with a publisher for national release. The U.S. Office of Education is making available implementation moneys to school systems wishing to adopt or adapt an EBCE program. So AEL's work within its region has proved beneficial to the education of youngsters throughout the Nation.

Resources available to the laboratory which help it to achieve its goals are varied. One important resource is the Consortium of State Departments of Education in the Appalachian Region. Created by AEL and incorporated in 1973 as a nonprofit corporation, the consortium represents a cooperative approach to regional educational problems. AEL's highly qualified staff is an important resource, working closely with personnel in all levels of SEA's and

LEA's to help achieve the laboratory's mission. These two factors have led to another key resource--AEL's high level of acceptance by educational leaders and institutions in the region. Through these strengths, AEL finds expertise for research, development, dissemination, and evaluation.

As an institution, AEL has achieved and maintained close relationships with educational practitioners. Product development has included, as an integral part, the involvement of students in pilot and field tests. SEA and LEA personnel serve on advisory councils during the research, development, testing, and dissemination of products and programs.

AEL has demonstrated its capability of dealing with education of disadvantaged youth in nonurban settings and is rapidly developing a similar capability in urban areas. The AEL staff has also been working on the development of R. & D. approaches to solving problems regarding handicapped youth, adult basic education and adult midcareer education, and on the development of educational approaches to dealing with delinquent youth, to reducing child abuse and neglect, and to providing specialized training for minorities and women. The laboratory has an institutional interest, and the staff a personal interest, in the Appalachian cultural heritage.

AEL will continue to serve the Appalachian and non-Appalachian areas of its participating States. As always, work at AEL is performed not only to serve the youth of the region, but to serve the youth of the Nation as well.

Governance

Seven States--Alabama, Kentucky, Tennessee, Ohio, Pennsylvania, Virginia, and West Virginia--participate directly in the operation of the laboratory through the AEL board of directors. Each State is represented on the 38-member board by the chief State officer or designee, a representative of the State school superintendents' association, and a representative of a doctoral degree-granting institution and a representative of a non-doctoral teacher-training institution. In addition, 10 members at large are selected from organizations, enterprises, and institutions not mentioned above.

The primary governance and policymaking body of the corporation is the eight-member executive board. (See figure 1.) Each State's board delegation elects a representative to serve on the executive board, which makes the membership of that board the seven elected representatives, plus the immediate past president.

The Consortium of State Departments of Education in the Appalachian Region is an important asset to the board because of its capability for regional input in decision-making. The consortium's board of directors, consisting of the chief State school officers of the 10 participating States, provides a natural communication link with the laboratory. The consortium has five standing task forces to assist AEL with any project which has regional implications. The consortium stands ready to create specialized advisory groups whenever the need arises.

Management

The laboratory director is responsible to the AEL board of directors for carrying out the requirements of the corporate charter, bylaws, policies and procedures, and for overall management of the laboratory's contracts, personnel, fiscal, and material resources.

AEL's internal management strategy centralizes some functions, with product development housed in separate production divisions. With almost all control of production contained within the operating divisions, high levels of productivity and personal commitment of participants to the division are maintained.

The centralized functions serve to insure the integrity of the laboratory without destroying the vitality of the separate product divisions. Laboratory communications, R. & D. product dissemination and quality control, interactions with the laboratory's educator clients, evaluations of products and procedures, and initiation of new work are centralized in the positions of coordinator of communications, associate director of dissemination and educational services, and associate director of planning and evaluation services—all directly responsible to the laboratory director. Supervision of the operation and personnel for the laboratory is performed by the coordinator of management services.

Figure 1. Organizational structure

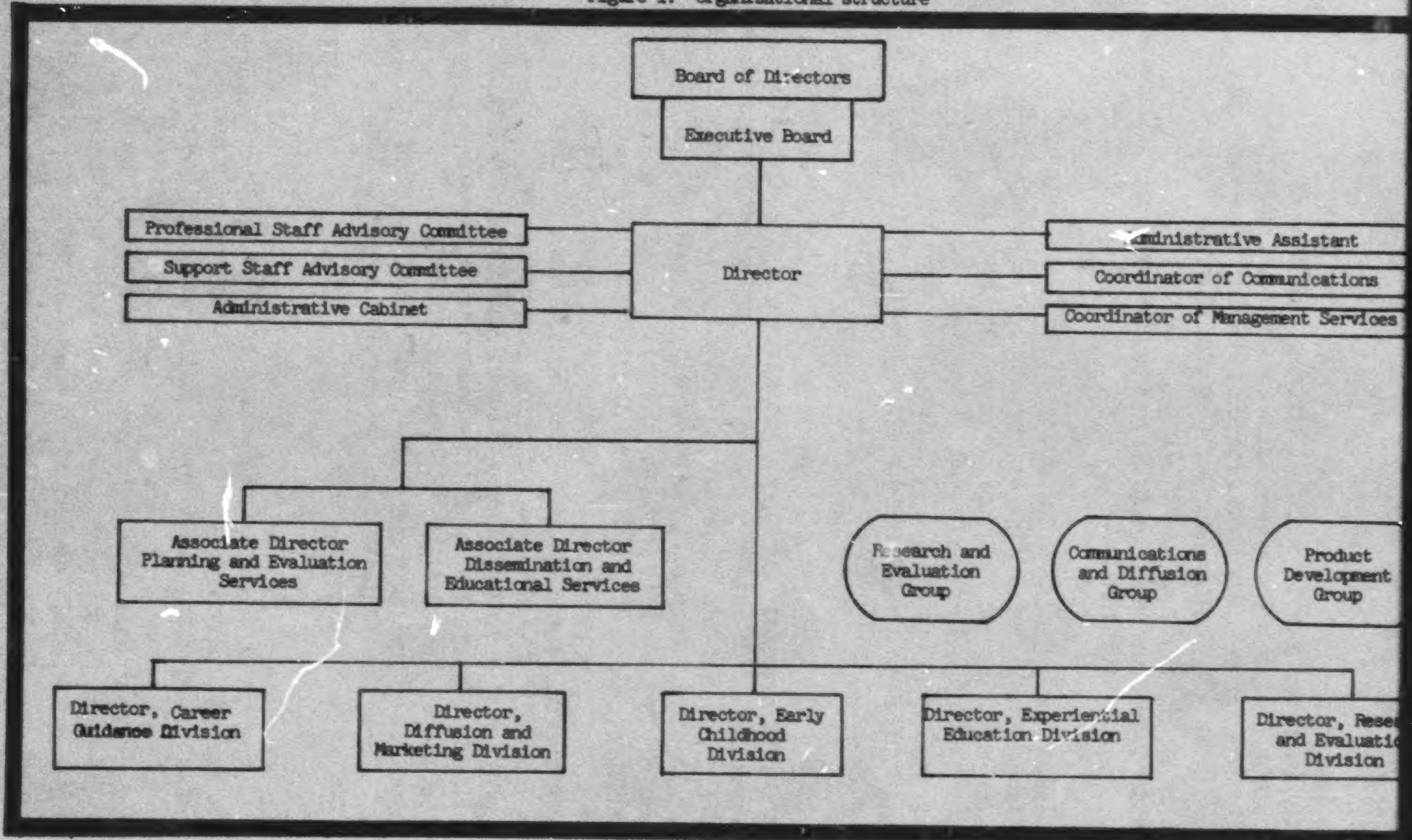

Board of Directors
Executive Board
Professional Staff Advisory Committee
Support Staff Advisory Committee
Administrative Cabinet
Director
Administrative Assistant
Coordinator of Communications
Coordinator of Management Services
Associate Director Planning and Evaluation Services
Associate Director Dissemination and Educational Services
Research and Evaluation Group
Communications and Diffusion Group
Product Development Group
Director, Career Guidance Division
Director, Diffusion and Marketing Division
Director, Early Childhood Division
Director, Experiential Education Division
Director, Rese
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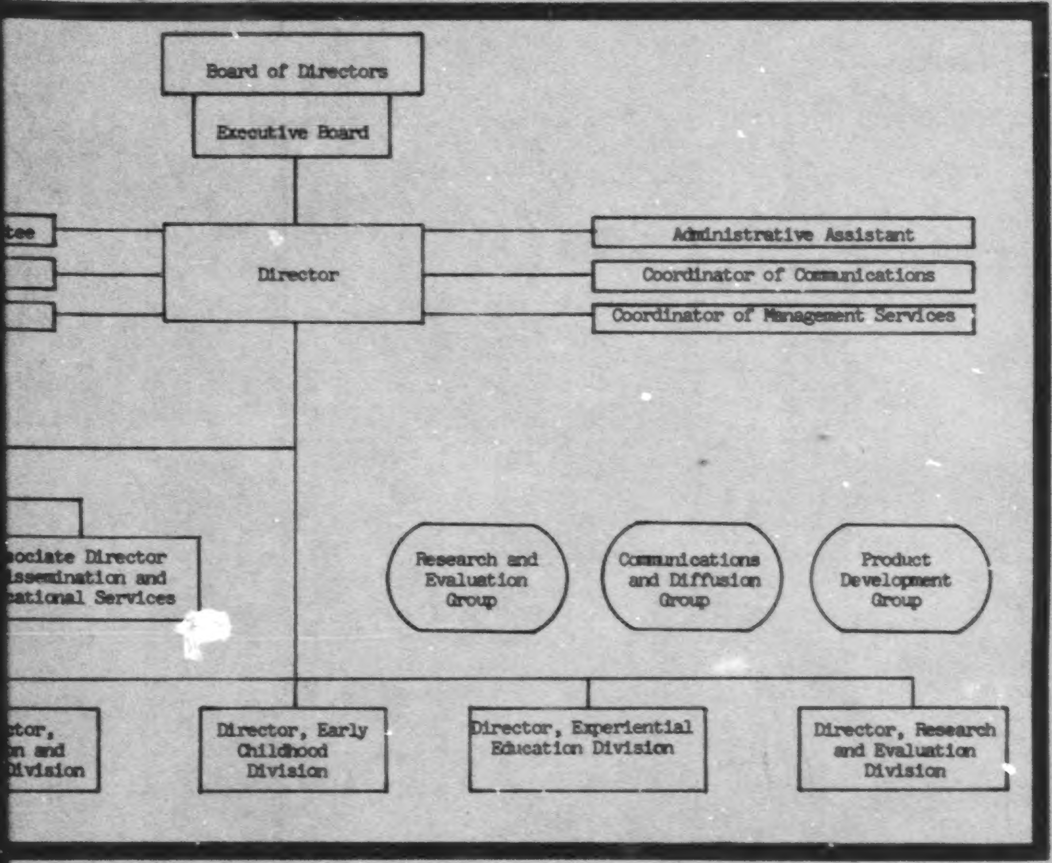
Figure 1. Organizational structure


Board of Directors
Executive Board
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Director
Administrative Assistant
Coordinator of Communications
Coordinator of Management Services
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Research and Evaluation Group
Communications and Diffusion Group
Product Development Group
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Division
Director, Early Childhood Division
Director, Experiential Education Division
Director, Research and Evaluation Division

To provide divisional input, there are the research and evaluation, communications and diffusion, and product development groups. These specialist groups are designed to provide a forum in which collegial relationships can develop. It is in the context of these groups that the associate directors monitor, evaluate, and control evaluation, product development, and dissemination activities of the several divisions.

Each division is organized according to its own needs. A division may have within the program staff evaluators or diffusion experts, but their activities are shared with the appropriate centralized staff through the collegial network described above. In addition, the research and evaluation division may contract with other divisions to perform research and evaluation tasks.

Planning for new work at the laboratory is performed centrally, with the planning and development committee of the executive board serving in an advisory capacity. Outside advisory groups are established by projects for input during their entire planning and operational phases. For example, our EBCE project's community advisory council consists of representatives from the State and local school boards, business, industry, political institutions, labor unions, students, parents, and others. The council has provided strong community-based support for the program. The early childhood division utilizes as an advisory group the early childhood task force of the Consortium of State Departments of Education in the Appalachian Region. Our Television for Effective Parenthood project, funded by the U.S. Office of Education, works with a curriculum/goals advisory committee.

Staff

AEL's highly qualified and specialized staff makes it an institution with unique competencies. For example, since 1968, staff have been deeply involved in the development of home-based early childhood education and parent training programs. From their work in these programs, staff have developed depth in experience and expertise in television production. Materials developed in these programs are also being used in settings with handicapped children. AEL/EBCE staff have acquired expertise in working with employers and the community in developing the experience-based learning program. Staff have cultivated more than 150 possible jobsites in the Kanawha Valley and are trained to conduct site analyses and develop task statements for each job.

Research and evaluation staff are experienced in the evaluation of information systems; media, including children's television; and vocational education, parent education, preschool education, and home-based education programs.

AEL personnel possess unique abilities in field studies and evaluation services; in program planning, design, and development; in instructional materials development; and in specialized training services. AEL's strengths lie in its cadre of professional employees with expertise in career education, early childhood education, experience-based education, and research and evaluation.

The laboratory employs a full-time staff of 53, which includes 35 professionals and 18 support staff. (For staff breakdown by degrees and discipline areas, see table 1.)

AEL is an equal opportunity affirmative action employer that provides equal employment to all persons. The laboratory's policies and practices actively seek to employ and advance females, minority groups, the handicapped, and others. The laboratory prepares annually an Equal Employment Affirmative Action Plan.

Staff Development

The Appalachia Educational Laboratory encourages personal growth and development of employees. Six members of the staff have been promoted from support to professional level. Five of these have been named administrative assistant, a position which requires the employee to perform at an advanced level all secretarial and stenographic tasks and to assume responsibility for some decisionmaking activities. The sixth employee has been promoted to associate educational development specialist in the Experience-Based Career Education project.

The laboratory is in the process of developing an improved personnel management system, which includes personnel

Table 1. Staff discipline profile

Field	Bachelor's degree	Master's degree	Doctoral degree
Biology	1		
Business/accounting	2		
Curriculum and instruction			3
Curriculum development			1
Early childhood education		1	
Education (incl. elem. & sec.)	1	2	
Educational administration		1	2
Educational psychology		1	2
Educational research			1
Guidance/counseling		3	
Liberal arts	1	2	
Psychology	1	1	1
Social science	2		
Special education		1	
Speech/languages/communication	2	1	
Totals	10	13	10

evaluation and staff development. Included in the plans are programs to support personal educational development.

Training Provided to Others

AEL's early childhood division has trained home visitors as part of its Home-Oriented Preschool Education project. Most of those trained, using the AEL-developed Home Visitor Training Package, are Appalachian women. The home visitor's role is to deliver weekly educational materials to the home and to work with the child and parent. This is one component of the four-part HOPE program designed for 3-, 4-, and 5-year-olds.

The EBCE project is in the process of providing training and technical assistance to school systems' personnel across the country in the dissemination and implementation of EBCE projects. Minority members and women are naturally included since school systems are affirmative action equal opportunity employers.

AEL has investigated several times the possibility of providing an intern program for university and college students. This possibility, currently under serious consideration, is one way to provide educational laboratories and R. & D. centers with a natural pool of potential employees. Specifically, the program will train women and minority men in technological and organizational strategies of R. & D. evaluation and marketing. AEL does employ graduate students for specific tasks whenever the opportunity arises.

Institutional Relationships

AEL links with numerous institutions throughout the region not only to provide service but to receive service.

The AEL board of directors is structured to include five classifications of designated representatives from each of the seven participating States. These include the chief State school officer or designee, a representative of the State school superintendents' association, a representative of a doctoral degree granting institution, a representative of a nondoctoral teacher training institution, and a total of 10 members at large. The board delegation from each State is operating in an advisory and advocacy role to more intimately involve AEL with the educational concerns and aspirations of each State.

The linkage to educators of the region provided by AEL's board of directors is strengthened and supplemented by the laboratory's alliance with the Consortium of State Departments of Education in the Appalachian Region. The consortium was created by AEL to assist in the investigation of how the laboratory might best accomplish the involvement of State education agency personnel in identification of appropriate R. & D. projects, advise AEL as such projects are under development, and serve to disseminate throughout the Appalachian region products thus produced.

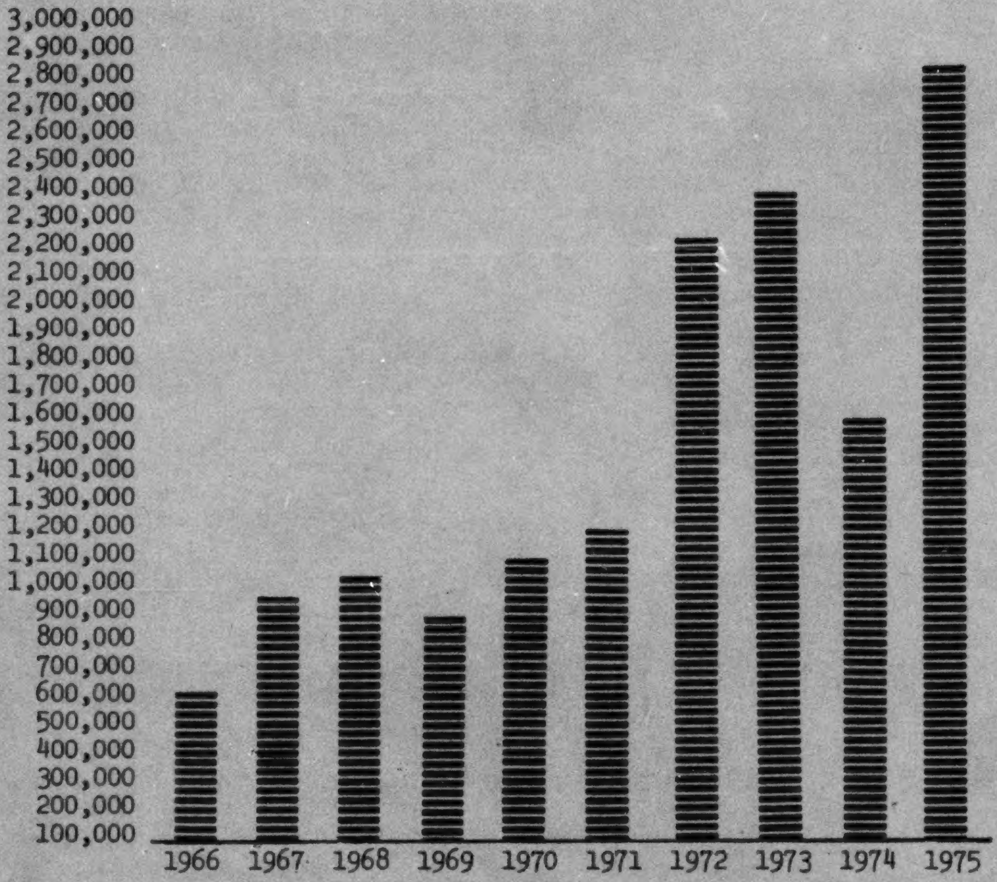
With a stable policymaking core composed of its board of directors (the chief State school officer from each participating State) and its administrative board (designated representative of each chief State school officer), the consortium assists in problems of a regional nature by establishing specialized task forces as temporary organizational structures. These task forces are composed of specialists in the substantive area of the problem from the member-State education departments. The specialists' task forces are not expected to actually carry out research and development work to meet the problem identified. They are, instead, instructed to determine whether solutions already exist which could be applied or to initiate, through AEL or another R. & D. agency, research and development activities to obtain solutions to the identified problem. The specialized task force then serves as an advisory body to the research and development project monitoring its progress to insure that the solution being developed is applicable and appropriate for use within the member States. When a solution has been developed, the consortium creates an advocate task force to disseminate this solution throughout the member-State region.

AEL also serves education in the participating States by offering direct services to State and local education agencies. The laboratory has matured sufficiently during its 10-year history as an R. & D. organization to offer its expertise in research and evaluation; program planning, design, and development; instructional materials development; dissemination/training; career education; early childhood education; and experience-based education to States and school systems throughout the States on a part-time basis. AEL is a resource to educators and educational decisionmakers wherever a need exists.

In addition to these reciprocal service relationships, AEL's special association with higher education in West Virginia has made computer time and equipment easily accessible.

Figure 2. Funding history

(AEL fiscal year: December 1-November 30)



Funding through fiscal year 1972 (November 30, 1972) was virtually 100% from USOE.

Funding for the period December 1, 1972 through February 29, 1976 was $7,477,542, of which NIE provided 86% and other sources 14%. Other sources include:

- U.S. Office of Education—$788,821 (10.5%).
- Appalachian Regional Commission—$65,000 (1.0%).
- Consortium of State Departments of Education in the Appalachian Region—$150,000 (2.0%).
- Miscellaneous small contracts—$37,087 (0.5%).

Recently, the Virginia Educational Research Association (VERA) asked AEL to consider sponsoring the initiation of a regional educational research association. AEL is meeting State representatives from the region to facilitate the development of such a professional association.

Facilities

The laboratory is headquartered in Charleston, W.Va., where it occupies more than 8,000 swuare feet of a downtown office building. In addition, an antiquated school building has been renovated by AEL to house its EBCE staff and to serve as a pilot site for the project during its development.

Printing presses and related equipment owned by AEL include:

- A.B. Dick model 350 offset press with chain delivery and receding stacker.
- Model 19 HA clamp power paper cutter (hydraulically powered).
- Olivetti S-24 word processor.
- GBC 16-bin collator.
- GBC electric punch.
- Champion padding press.
- Pitney-Bowes model F M folder.
- Addressograph-Multigraph model 820 headliner.
- Addressograph-Multigraph waxer.
- A.B. Dick model 675 paper plate maker.
- Xerox model 7000 w/4 reduction settings and a 10-bin collator.

AEL has use of West Virginia University's data processing equipment through a terminal and associated hardware which is telegraphically linked with the WVU computer, some 150 miles away. The computer equipment configuration consists of a Data 100 model 70 high speed remote batch terminal. The terminal is tied to the IBM 360/75 large scale general purpose electronic digital computer at the WVU Computer Center.

AEL has produced color television programs using facilities at both WQED-TV (Metropolitan Pittsburgh Public Broadcasting) and WTVF-TV channel 5 in Nashville, Tenn. This has been a collaborative relationship in which efforts have been to produce the best quality television for the most reasonable cost. These facilities provided include studio, equipment, and personnel in what is usually known as a "below the line" arrangement.

To complement our television work, the laboratory owns video equipment which includes:

- 1 JVC color video cassette recorder model CR-6100U.
- 1 JVC color video cassette recorder model CR-6000U.
- 2 19" portable Quasar QS3000 color monitors.

CURRENT NIE PROJECTS

Project CAREER DECISIONMAKING PROGRAM FOR SECONDARY AND POSTSECONDARY STUDENTS

Objectives and strategies. AEL has developed a Career Decisionmaking (CDM) program for secondary students, which consists of 15 Career Guidance Units and a supportive Career Information System based on the Dictionary of Occupational Titles. The CDM program is designed to help students gain greater understanding of themselves and the world of work by facilitating the development of exploratory and decisionmaking skills. This program, by utilizing basic research of the Department of Labor, has effectively built a link between public school program offerings and the services offered by the Labor Department.

Status. Fiscal year 1976 work includes revision and dissemination activities. Secondary-level materials will be made available by McKnight Publishing Co. Also in 1976, the staff has begun to adapt these materials for college and other postsecondary use. Postsecondary materials will be completed in September 1977.

Funding.

Fiscal year 1972	$468,519
Fiscal year 1973	414,768
Fiscal year 1974	527,749
Fiscal year 1975	203,707
Fiscal year 1976	382,663
Total	1,997,406

Accomplishments. Dissemination of the CDM program includes extensive marketing of the secondary materials by the Appalachia Educational Laboratory and McKnight Publishing Co.

Monitoring history.

Dates	Project officer	Activity
Fiscal year 1972	Lance Hodes	Quarterly site visits.
Fiscal year 1973	Lance Hodes	Quarterly site visits.
March 1973	Lance Hodes Ed Herr* Ken Hoyt* Shirley Cramer*	Project review.
July 1973	Lance Hodes, Consultants	Project review.
1974 November 1975	Lance Hodes	Monthly site visits.
1974	Lance Hodes	Project staff meeting in Washington, D.C.
1975	Lance Hodes	Meeting at career education forum in Ohio.
1975 to present	Ivan Charner	November 1975, site visit. January 1976, consultation in Washington, D.C. February 1976, consultation in Washington, D.C. Bimonthly telephone consultations.

*Consultants.

Project THE STABILIZATION OF AN EXPERIENCE-BASED CAREER EDUCATION PROGRAM

Objectives and strategies. AEL has developed a comprehensive and personalized program for high school youth that relies on community participation—employers, unions, public agencies, schools, parents. The basic assumption is that, for some students, academic, career, and personal learning are best fostered through extensive contact with adults in working situations. Fiscal year 1976 EBCE are to establish relationships with LEA's regarding testing of the lab-based EBCE model, to respond to LEA demand for assistance in implementing EBCE whole or partial models by providing technical assistance, and to complete the publication of training and evaluation materials. A major part of fiscal 1976 activities is to work with the U.S. Office of Education, which is making part D Vocational Education Act moneys available to school systems to implement EBCE programs nationwide.

Status. The project is in the implementation stage, and the AEL/EBCE staff is working with LEA's in testing implementation strategies.

Funding.

Fiscal year 1972*	$771,402
Fiscal year 1973	107,889
Fiscal year 1974	1,139,313
Fiscal year 1975	932,705
Fiscal year 1976	749,040
Total.	3,700,349

*This project was transferred to the National Institute of Education from the U.S. Office of Education; fiscal year 1972 funding is from USOE.

Accomplishments. The most extensive career education program undertaken by NIE, EBCE has established a national reputation as an alternative experiential method to explore a range of careers prior to making educational and occupational decisions. Currently, AEL/EBCE involves hundreds of students in 13 school systems in 8 States. A total instructional delivery system has been developed with all the manuals, forms, and student expendables available. It is organized for individualized instruciton and delivery of both academic and career education credit. AEL/EBCE has 155 experience sites with more than 700 resource people, representing more than 100 of the 114 worker trait groups.

Monitoring history.

Dates	Project officer	Activity
July 1972-July 1973	Bernard Yahoff (under Thomas Israel)	Quarterly meetings of EBCE program directors. Quarterly site visits to AEL.
July 1973-September 1974	Thomas Israel	Quarterly meetings of EBCE directors. Quarterly site visits to AEL. 2 additional site visits to AEL, May 1974.
1974	Site review team: Keith Goldhammer, Richard Graham, Glenys Unruh, Claude Brown, Charles Bowen	2 site visits to AEL.
1974	Keith Goldhammer, Mitch Brickell, Mathew Miles, Edward Glazer, Corrine Rieder	Replication planning meeting, Warm Springs, Oreg.
April 1975	John O'Brien	Quarterly meeting of EBCE directors. Quarterly site visits to AEL.
1975 to present	Ronald Bucknam	6 meetings of project directors, Washington, D.C.

Project NATIONAL BROKERAGE STUDY

Objectives and strategies. To give prospective adopters of EBCE a single source of information about the four EBCE models, a national EBCE agency is proposed to represent the interests of the four participating EBCE labs. This agency would serve as a broker to prospective LEA adopters. AEL has participated in national meetings and generated materials for use in performing the brokerage activity.

Funding.

Fiscal year 1976 . . $10,900

Project

MARKETABLE PRESCHOOL EDUCATION PROGRAM

Objectives and strategies. The goal of the Marketable Preschool Education (MPE) project is to provide instructional materials and processes for use in preschool education of rural Appalachian 3- to 5-year-olds. MPE products are based on the validated Home-Oriented Preschool Education model. Users are local and State education agencies adopting early childhood education, plus such Office of Child Development programs as Head Start and Home Start, day-care centers, and programs for young children operated by the Appalachian Regional Commission. Beneficiaries are the children, and parents who learn how to work better with their children. Materials are being tested in nonurban areas across the United States.

Status. The project has recently completed 2 television pilot programs, reviewed and revised some 40 production-ready scripts , revised 59 competencies for preschool youngsters in the Appalachian region, and is (fiscal year 1976) completing several nonbroadcast print and multimedia packages: A Home Visitor Training Package for publisher placement, and classroom learning activity files, day-care/home learning activity files, and parent discussion guides for field testing. A major field test for formative evaluation purposes is scheduled for spring and summer 1976. This field test will utilize the popular "Mister Rogers' Neighborhood" television series. Impact evaluation under field-test conditions will follow this formative evaluation process.

Funding.

Fiscal year 1971*.	$520,430
Fiscal year 1972*.	278,958
Fiscal year 1973	518,000
Fiscal year 1974	365,799
Fiscal year 1975	403,000
Fiscal year 1976	235,000
Total.	2,321,187

*This project was transferred to the National Institute of Education from the U.S. Office of Education; funding for fiscal years 1971 and 1972 is from USOE.

Accomplishments. The Home Visitor Training Package has been offered to publishers. At least three have expressed an interest in making it commercially available, and it probably will be published. The day-care/home and classroom learning activity files have been prepared, field tested, and are in their final revision. Project staff have completed two television pilot video tapes and 40 production-ready scripts. To accompany a 1976 field test, weekly guides for use with the "Mister Rogers' Neighborhood" television show have been produced and distributed.

Monitoring history.

Dates	Project officer	Activity
1972-July 1974	Michael O'Malley	Early childhood task force monitor.
June 1973	M. O'Malley, R. Calfee, B. Cowlan, G. Lesser, A. O'Keefe, J. Sandler, C. Sarson, H. Zimiles	2 visits.
Fiscal year 1974	M. O'Malley, J. Sandler	Visit.
	J. Sandler	2 visits.
July 1974-March 1976	J. Sandler	F. & P., TAD.
Fiscal year 1975	J. Sandler	3 visits.
Fiscal year 1976	J. Sandler, J. Lord	1 visit each.
March 1976	J. Lord	F. & P., TAD.

Table 2. Current non-NIE projects

Program	Objectives and strategies	Status	Funding	Accomplishments
Television for Effective Parenthood	The project's objective is to desig and create the prototype for a television series, with printed support materials, which will assist prospective parents and parents of young children (birth through 5 years of age) in developing effective parenting practices. This activity strengthens AEL's early childhood home-oriented thrust and its television development and production capabilities.	The project has completed a national needs assessment of parents of the target audience; collected, described, and evaluated existing film, television, and printed materials; developed goals and instructional strategies for the series; prepared guidelines for writing treatments for individual shows; designed, produced, and evaluated a 1-hour experimental television special to determine audience reaction to selected program features; and is currently preparing a prototype ½-hour pilot program for broadcast and evaluation in summer 1976. Treatments will be prepared this year for each projected program of the series. The work is scheduled for completion Sept. 30, 1976.	Fiscal year 1976* $788,821 (USOE) *The percentage of institutional funding due to this project is difficult to represent inasmuch as it includes 3 subcontracts which together total over $322,000.	A national-needs-assessm instrument was developed to gather data from a na sample of parents and pr parents. The assessment in a report: A National of Parenting Skills and mation Needs of Parents Children. Existing mate have been evaluated and in an evaluative documen considers the usability materials for reaching a viewing audience. This tion is reported in An E of Visual and Printed Ma for Effective Parenting. experimental television "It's Never Too Late," h produced that permits in gation of audience prefe for program format.
Research and evaluation projects	Small R. & E. projects are being completed under contract with various agencies. Each such project is being conducted as part of the laboratory's expanded mission of services to local and State education agencies within the member-State region.		In fiscal year 1976, it is anticipated that small projects conducted for local and State education agencies will provide less than 5.0% of the total AEL budget.	

Table 2. Current non-NIE projects

Status	Funding	Accomplishments
The project has completed a national needs assessment of parents of the target audience; collected, described, and evaluated existing film, television, and printed materials; developed goals and instructional strategies for the series; prepared guidelines for writing treatments for individual shows; designed, produced, and evaluated a 1-hour experimental television special to determine audience reaction to selected program features; and is currently preparing a prototype ½-hour pilot program for broadcast and evaluation in summer 1976. Treatments will be prepared this year for each projected program of the series. The work is scheduled for completion Sept. 30, 1976.	Fiscal year 1976* $788,821 (USOE) *The percentage of institutional funding due to this project is difficult to represent inasmuch as it includes 3 subcontracts which together total over $322,000.	A national-needs-assessment instrument was developed and used to gather data from a national sample of parents and prospective parents. The assessment resulted in a report: A National Assessment of Parenting Skills and Information Needs of Parents of Young Children. Existing materials have been evaluated and reported in an evaluative document which considers the usability of the materials for reaching a national viewing audience. This information is reported in An Evaluation of Visual and Printed Materials for Effective Parenting. A 1-hour experimental television special, "It's Never Too Late," has been produced that permits investigation of audience preferences for program format.
	In fiscal year 1976, it is anticipated that small projects conducted for local and State education agencies will provide less than 5.0% of the total AEL budget.	

CEMREL, INC.

Mission CEMREL, Inc., was established to improve the quality of education for the Nation's children and to bridge the gap between sound educational research and development and school practice in cooperation with other educational agencies.

CEMREL's primary mission is to improve the effectiveness of instruction in the schools by the development and application of curriculums and instructional systems based upon (1) relevant research in the social and behavioral sciences; (2) systematic instructional analysis by scholars in the major content areas; (3) the application of systems analysis and planning to the organization and management of instruction; (4) careful assessment of individual learners and learning outcomes; and (5) the use of new and promising instructional technology.

CEMREL concentrates primarily on four types of educational work: (1) The development of instructional materials; (2) the conduct of research and evaluation studies; (3) school and community services; and (4) publications and publishing services.

CEMREL's instructional materials and program development cover a wide range of topics: (1) The arts and humanities; (2) science and mathematics; (3) reading and language development;(4) early childhood education; (5) the educational handicapped and disadvantaged; (6) environmental education; and (7) consumer and health education.

Users of CEMREL's products and services range from those in preschool education to R. & D. specialists at the university level. The materials and programs themselves are equally diverse. They include instructional units for all grade levels, television shows, programed textbooks, films, filmstrips, video tapes, slide-tape shows, modular furniture for classroom use, handbooks and guides for administrators, teacher-training materials, curriculum guides, parent-training materials, resource materials for researchers, computer programs, and evaluation techniques and instruments.

Some of the more widely known CEMREL products are: The Five Sense Store, from the Aesthetic Education program (The Viking Press/Lincoln Center for the Performing Arts); Language and Thinking, from our Instructional Systems program (The Follett

Publishing Co.); Classroom and Instructional Management (CLAIM), from the Instructional Systems program (Walker Educational Book Corp.); Comprehensive School Mathematics program (the CEMREL Institute); Viola Spolin's Theatre Game File (the CEMREL Institute); School Before Six, National Program on Early Childhood Education (the CEMREL Institute); and The DARCEE Materials, National Program on Early Childhood Education (the CEMREL Institute).

CEMREL's research and evaluation staff conducts (1) basic research in human development and learning; (2) inquiry into improved teaching methods; (3) evaluation studies aimed at improving educational materials and programs; and (4) summative evaluation studies to provide information about the effectiveness of educational programs and products to educational developers, the professional community, and potential customers.

CEMREL has designed its school and community services activities to promote the dissemination and use of effective materials, techniques, and other results of educational R. & D. To achieve effective use of R. & D. resources, CEMREL manages large-scale national and regional implementation efforts and provides technical assistance to (1) school districts; (2) State departments of education; (3) city governments; and (4) other organizations and institutions.

CEMREL also maintains a continuing series of workshops, seminars, and training institutes: (1) Assess and solve learning problems in the classroom, (2) classroom and instructional management, (3) communications skills for the classroom teacher, (4) individualization for the adolescent with learning problems, (5) reading between the lines (sex stereotyping in instructional materials), (6) prescription development, (7) strengthen the administrative relationship (STAR series), (8) individualization skills for the classroom teacher, and (9) teacher training in CEMREL materials.

Publications and publishing services make the results of CEMREL's research, development, and program implementation activities widely available by publishing and distributing books and papers centered around the educational topics of (1) the arts/aesthetics education; (2) mathematics; (3) early childhood education; (4) teacher/parent training; and (5) evaluation. Editorial and graphic preparation of both curriculum materials and scholarly documents for publication by other organizations is also provided by this division of CEMREL, Inc.

Governance

CEMREL's board of directors is responsible for the policy and governance of the organization. There are 15 members of the board, who elect the president and other officers of the corporation. A national council of advisers made up of distinguished members of the academic and business communities assist the board of directors through the review of CEMREL's programs and the discussion of policy issues.

Management

CEMREL's organizational structure reflects three general categories of management activities: (1) Governance, policy, and planning; (2) administration and support services; and (3) program operations.

The board of directors and the president are responsible for overall corporate governance, policy determination, and long-range planning. They are assisted in these activities by a national council of advisers.

A second management level provides administrative and support services for the corporation. These include facility, accounting, personnel, and contract administration, as well as more specialized areas such as film, sound, graphics and design services, data processing, production, and reproduction services. These supportive functions are organized to provide each of CEMREL's programs with equal access to the highest quality services.

The programs and projects of the corporation are managed within five groups:

(1) Curriculum and materials development—arts and humanities group;
(2) Curriculum and materials development—mathematics and science group;
(3) Research and evaluation group;
(4) School and community educational services group; and
(5) Materials development—publications and publishing services group.

Program operations and the administrative responsibility for each program flows from the director of that program to the group manager, to the chief executive officer, and to the board of directors. Each major program also has a national advisory committee which renders advice and makes recommendations on policy and program direction to both the director of the program and the chief administrative officer of the corporation, as well. These advisory committees also

Figure 1. Organizational structure

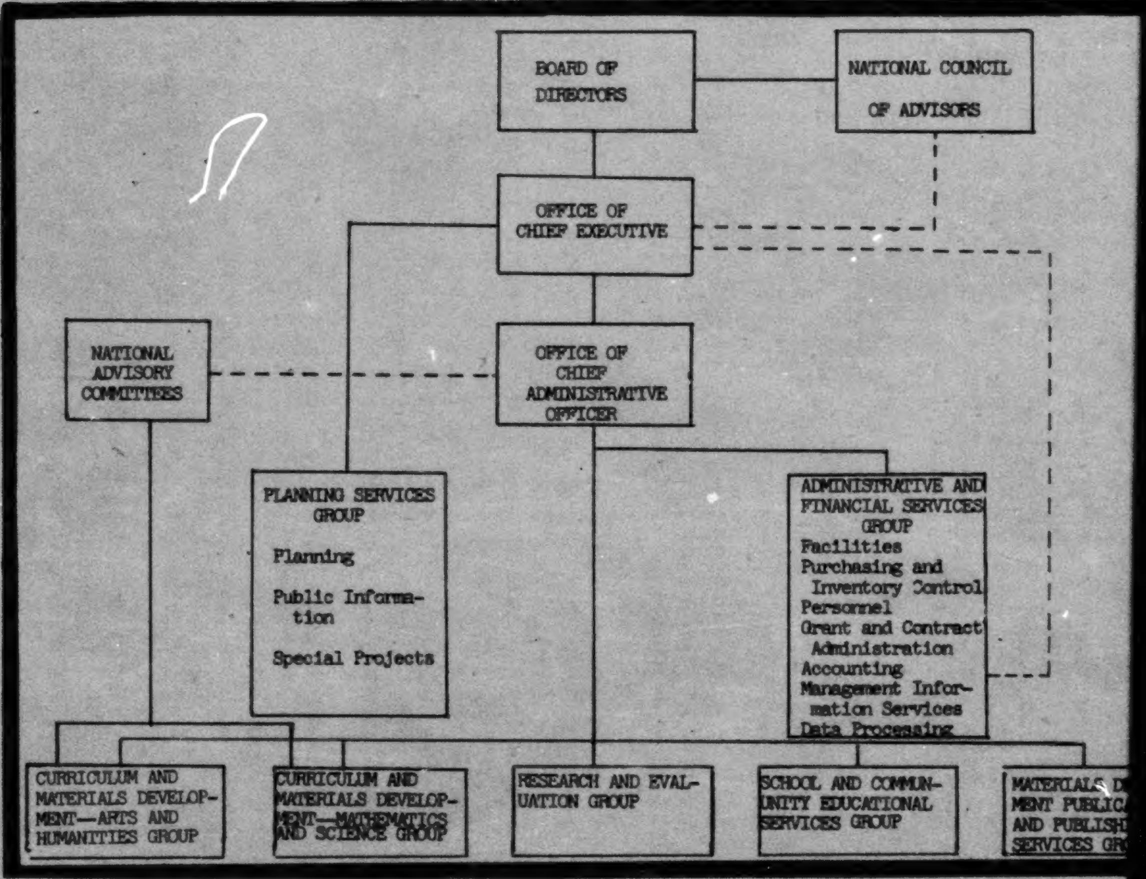

BOARD OF DIRECTORS
NATIONAL COUNCIL OF ADVISORS
OFFICE OF CHIEF EXECUTIVE
NATIONAL ADVISORY COMMITTEES
OFFICE OF CHIEF ADMINISTRATIVE OFFICER
PLANNING SERVICES GROUP
Planning
Public Information
Special Projects
ADMINISTRATIVE AND FINANCIAL SERVICES GROUP
Facilities
Purchasing and Inventory Control
Personnel
Grant and Contract Administration
Accounting
Management Information Services
Data Processing
CURRICULUM AND MATERIALS DEVELOPMENT—ARTS AND HUMANITIES GROUP
CURRICULUM AND MATERIALS DEVELOPMENT—MATHEMATICS AND SCIENCE GROUP
RESEARCH AND EVALUATION GROUP
SCHOOL AND COMMUNITY EDUCATIONAL SERVICES GROUP
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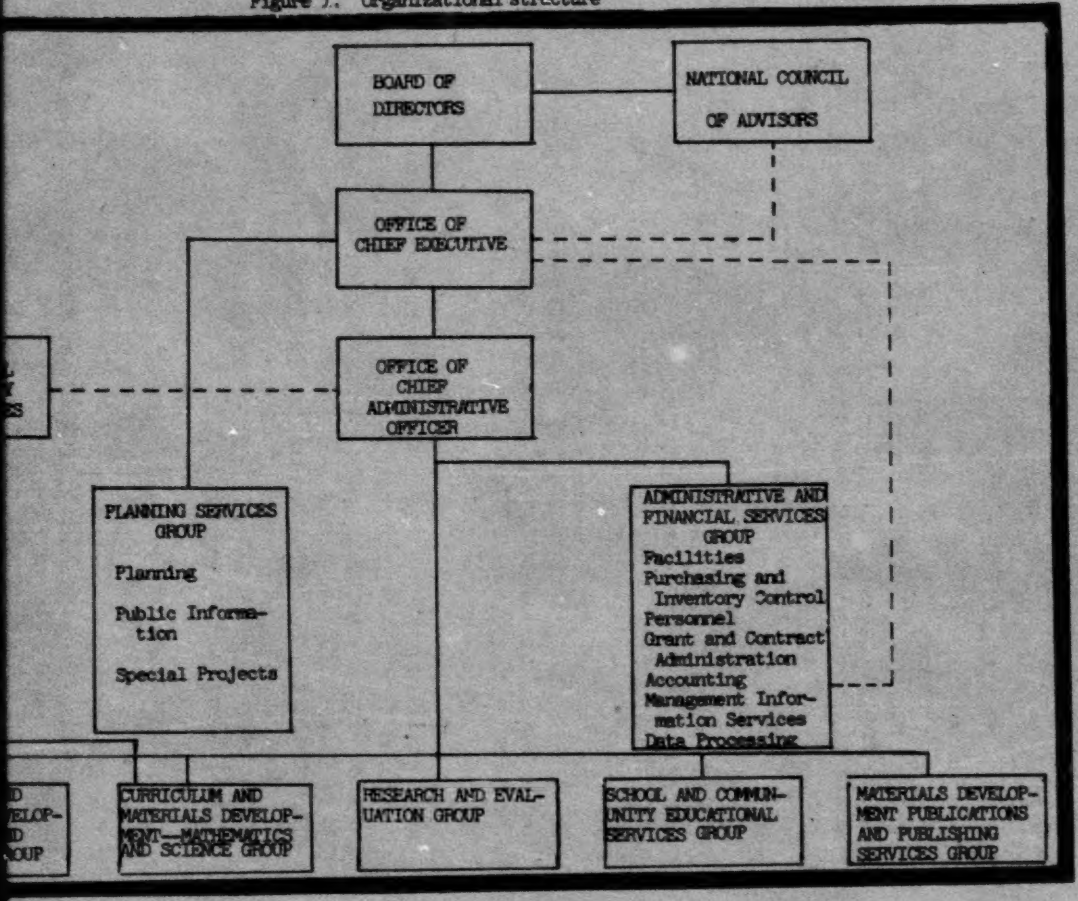
Figure 1. Organizational structure


BOARD OF DIRECTORS
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RESEARCH AND EVALUATION GROUP
SCHOOL AND COMMUNITY EDUCATIONAL SERVICES GROUP
MATERIALS DEVELOPMENT PUBLICATIONS AND PUBLISHING SERVICES GROUP

serve an evaluative function, of course, in that they review each program, its direction, its problems, its progress, and the functioning of each of its work units on a regular basis.

Staff

CEMREL employs 73 professionals, 32 support professionals, 33 clerical staff, 15 technical/support staff, and 1 graduate assistant. Of the 154 staff members, 119 work on a full-time basis (50 percent or more), 5 work part-time (less than 50 percent), and 30 staff members work on an hourly (temporary or casual) basis.

Staff Development

Aside from the training provided to minority-group member employees as part of its affirmative action plan, CEMREL encourages employees to secure advanced degrees. Specific staff development activities are designed and maintained where appropriate for the work roles involved; e.g., mathematicians provide seminar training to the staff teacher-writers in CSMP on such topics as advanced probability, graph theory, etc; several professional staff members from each major program area participate in seminars on marketing, market research, and development. In short, as appropriate, each program or project will provide such staff development as may be required to do the best job possible with its contracts, and to provide for advanced training for staff members.

Training Provided to Others

Professional staff members of CEMREL with backgrounds in aesthetics, instructional systems, early childhood education, psychology, sociology, evaluation, educational public relations, diffusion, educational administration, etc., have conducted approximately 200 workshops of varying lengths over the past 3 years.

Institutional Relationships

CEMREL's Aesthetic Education program has a network of eight aesthetic education learning centers operating throughout the country, with two national aesthetic education centers scheduled to open during 1976—one in Washington, D.C., and one in St. Louis. Each aesthetic education learning center has evolved its own aims and organization in consort with the three demonstration schools it serves and, of course, each has an ongoing educational program as part of CEMREL's teacher-training program in aesthetic education.

Table 1. Staff discipline profile

Field	Bachelor's degree	Master's degree	Doctoral degree
Accounting/business administration	5	-	
Anthropology	1	1	
Art/art history	2	-	
Art education	2	2	1
Biology	1	-	
Communications	1	-	
Counseling	-	3	
Data processing	-	-	
Economics	1	2	
Education	22	16	5
Educational administration/ educational policy and statistics	-	4	2
Educational psychology and research	-	2	4
Education—special	2	-	
English/english literature	11	2	
Fine arts	5	1	
Government	1	-	
Graphic design	3	-	
History	8	2	
Journalism	1	-	
Languages	4	-	
Liberal arts	2	-	
Library science	-	2	
Mathamatics	9	8	1
Music/music education	3	2	1
Philosophy	2	-	1
Political science	1	1	
Physical education	1	-	
Psychology	4	1	1
Regional studies	-	1	
Speech/communication	2	2	
Sociology	2	-	
Social welfare	1	-	
Social science	1	-	
Statistics	-	1	
Theater	2	1	
Totals	100	54	16

Each center is provided with all of the Aesthetic Education program resource units that have been published, other AEP publications, six teacher-education packages, modular furniture designed by the CEMREL staff, and seminars and workshops for teachers and administrators conducted by CEMREL staff members.

An Aesthetic Education program newsletter titled *Our Bag* is published quarterly and carries news about AEP and the network of centers.

In addition to the 26 demonstration, or cooperating, schools allied with the learning centers, there are two demonstration schools for aesthetic education in St. Louis, and 15 schools closely allied with the Memphis Aesthetic Education Learning Center. There are 692 teachers and specialists working full time with the program. Fifteen colleges and universities are directly involved with the centers, as are 18 school districts, 11 art agencies, 7 other community agencies, and 4 State departments of education. Eleven colleges and universities in the United States have courses in aesthetic education.

In another AEP-related project, the traveling exhibit also titled *The Five Sense Store*, being circulated through the Smithsonian Institution Traveling Exhibition Service, has given more than 200,000 children and teachers in the United States and Canada exposure to the materials. The traveling exhibit has been extended through 1978. It began in April 1973.

CEMREL's Comprehensive School Mathematics program for children K-6 has a network of 200 elementary schools in its extended pilot test of K-3 materials during the 1975-76 school year. It is anticipated that it will expand to twice that size in 1976-77. The netowrk includes 758 teachers, 32 coordinators, and 19,999 children in 36 school districts. The test is being conducted in 10 States and Washington, D.C.

The Elements of Mathematics, designed for gifted students grades 7-12, is being used in a network of 25 schools, with 40 teachers. Approximately 1,000 students are involved. Four universities are using segments of the textbook series as undergraduate mathematics courses.

Facilities

During the fall of 1973, CEMREL, Inc., moved into a renovated 50,000-square-foot facility. This facility contains the usual office spaces for professional and clerical staff. In addition to this space, CEMREL maintains a modern data-processing center, a word-processing center, a graphic-arts center, a reproduction center, and exceptional conference facilities.

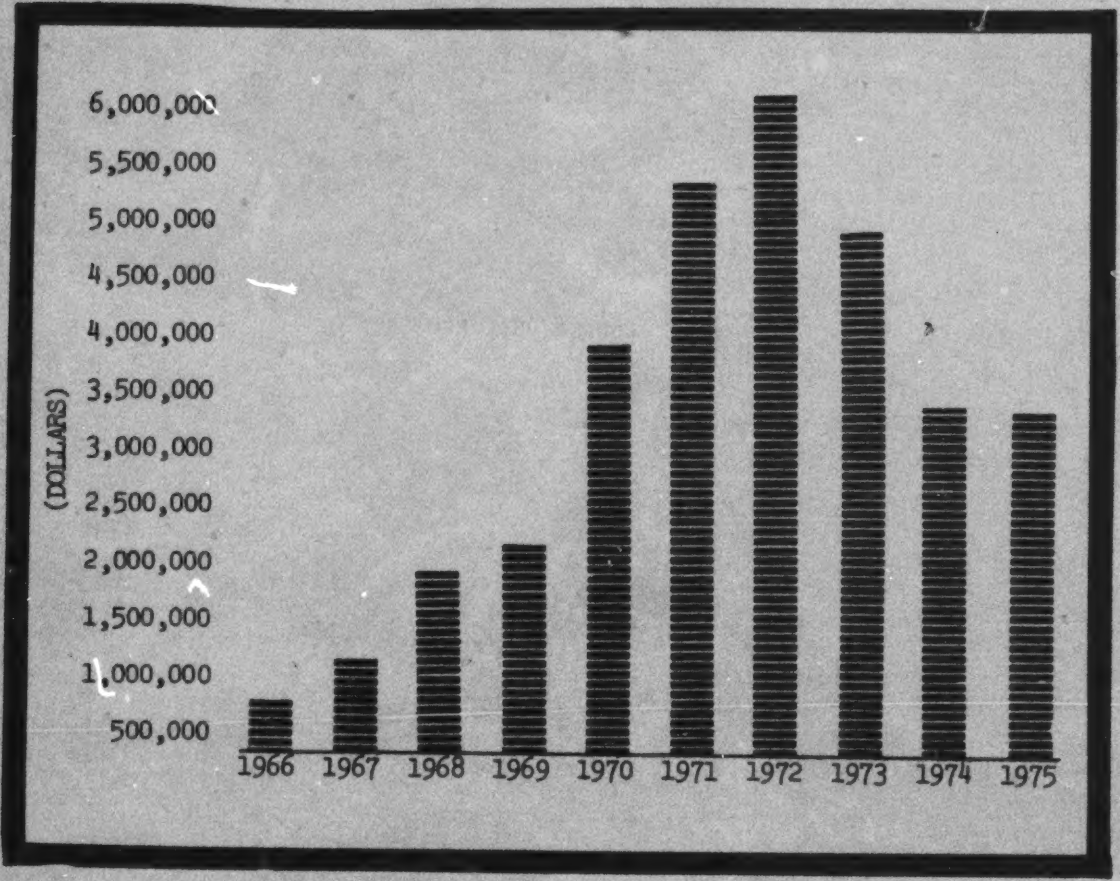
CEMREL's computer facility consists of a General Automation 18/30 Mini DMS per minute vacuum card reader, console typewriter, a 600 line per minute line printer, two disk drives each capable of storing over 1 million bytes of data, a nine-track 800 BPI magnetic-tape drive and IBM 129 and UNIVAC 1710 data recorders. This computer also has a data link with the world's largest commercially available computers and the flexibility of establishing communications with other systems.

CEMREL utilizes two electronically controlled word-processing systems developed by Wang Laboratories, Inc. The system consists of a modified, heavy-duty IBM Selectric typewriter, an electronic control unit, and two magnetic-tape cassette drives.

CEMREL's sound studio is fully equipped to do high-quality recording, mixing, and mastering. A Nagra tape recorder provides the capability to do fine sound recording on location, and a Pentagon four-unit cassette duplicator enables us to reproduce cassettes easily. The photo studio does location and studio photography, black/white and color, photostats, and velox prints. One of the three darkrooms is equipped for color processing, and a complete range of enlarging and printing services can be handled. The sound and photo studios are each staffed with a full-time technician.

The printshop is equipped with five presses to handle printing needs from small one-color jobs to fine halftone reproduction. Two Multilith presses are used primarily for standard 8½ by 11 document printing. The Multilith 2675 prints both sides of a sheet in one pass; each of these presses is equipped with a collator. An A. B. Dick offset press that uses metal plates can produce quality halftones and color work. Binding capabilities include a folder, a power papercutter, and equipment for plastic-comb, saddle-wire, and perfect bindings. A plastic laminating machine bonds plastic to paper up to 18 inches wide and as long as needed. Three full-time pressmen and a bindery helper staff the printshop.

Figure 2. Funding history



Conference space within the facility would be considered exceptional when compared to similarly designed office complexes.

Three floors of the complex which house the major programs and administrative offices of the corporation have at least two conference rooms each. In addition to the program area conference space, the facility was designed with one floor, totaling 6,000 square feet, for general or public conferences. Adjacent to all three areas mentioned above is a fully equipped kitchen capable of serving simple refreshments or complete meals. All support-type equipment exists for the convenience of conferees such as projectors, video-tape machines, TV monitors, etc.

CURRENT NIE PROJECTS

Project AESTHETIC EDUCATION PROGRAM

Objectives and strategies. The purpose of this program is to develop and test multimedia instructional packages in aesthetic education. Each large concept and percept area in the arts contains many instructional packages of materials which constitute many hundreds of hours of instructional time, to be used in regular classrooms rather than in specialized art classrooms, in grades K-7. Though generally neglected, aesthetic perceptions are no less significant in human development than moral, social, emotional, or logico-mathematical. This curriculum seeks to redress an academic imbalance which favors verbal/mathematical concept formation over any other kind. The material will be introduced into the regular elementary school classroom by teachers without special art or music backgrounds. With sensitive adult support these materials are more or less self-instructional.

Funding.

Fiscal year 1973	$804,875
Fiscal year 1974	1,051,773

Fiscal year 1974 mod . .	$334,493
Fiscal year 1975	1,371,687
Total	*3,562,828
Fiscal year 1976	954,000
Fiscal year 1977	546,621
Total	**1,500,621

*1972-75 3-year contract.
**1975-77 2-year contract.

Monitoring history.

Date	Project officer	Activities
1973 to present	Martin Engel	January 1973, site visit. June 1974, site review with Elliot Eisner and M. Engel. October 1974, site visit, program review, schools visitation with Garry McDaniels and M. Engel. February 1975, site visit, program review, policy review with M. Engel and CEMREL national advisory board. October 1975, site visit, program review with Rubin, DeVecchia, and Thomas.

Date	Project officer	Activities
		April 1976, site visit, quarterly report reviews, major milestone reviews, and final report for 1-3 year contract conducted by project officer.

Project COMPREHENSIVE SCHOOL MATHEMATICS PROGRAM (CSMP)

Objectives and strategies. The ultimate objective of CSMP since its inception has been to improve the effectiveness of mathematics instruction for students of all ability levels in grades K-12 by developing curriculums which (1) contain the most relevant and sound mathematical content essential for understanding the nature of mathematics and its ever-increasing applications to diverse situations in the real world; and (2) reflect the didactical (analysis of content) and pedagogical breakthroughs of the last two decades, thus presenting the content in a humanistic fashion and rendering it accessible, exciting, and meaningful to youngsters. The presentation of the CSMP curriculums, built in this spirit, should maximize the student's success for learning, using, and appreciating mathematics. Need for the program is based largely on the assumption that children could learn, and enjoy learning, much more mathematics than they do now.

The content of the program—

(1) Includes the development of number systems and their operations and the introduction of geometry, measurement, and probability in all grades;
(2) Is based on the unifying ideas of set, function, and relation which are creatively incorporated without formal symbolism or vocabulary;
(3) Leads students to problem-solving strategies and applications of skills; and
(4) Teaches the student the computational skills that are usually included in an elementary mathematics program, but through nonstandard methods.

The pedagogical devices of the program are innovative. The Papy Minicomputer, as both a computing device and motivation for mental arithmetic, reinforces quantifying as well as place-value concepts. As a student tool, it is readily manipulated and enables the student to visualize an exchange of "2 for 1" much more easily than a 10" for 1" exchange. As a demonstration model, it is extremely usable by the teacher for large- or small-group instruction.

The languages of strings and arrows make accessible the basic mathematical concepts and ideas and develop understanding through child-related discussion. Storybooks bring children into contact with mathematics at levels until now unexplored in education.

The program's teacher guides suggest a variety of presentation methods; include management suggestions; contain student materials in the various strands which are written at different ability levels, thus permitting flexibility of use and complementing the spiral approach; explain content clearly; suggest implementation at various stages for the teacher; use the spiral approach which permits the teacher to move through strands without requiring a "mastery level" for each student; and contains detailed suggestions for student activities involving rich mathematical situations.

Status. The original 1967 basic program plan (funded by OE) provides for the completion of a program encompassing three distinct developmental efforts:

(1) A secondary program for high-ability upper-track students in grades 7-12 (1967 through 1976);
(2) An elementary program for the total student population in grades K-6 (1967 through 1979); and
(3) A secondary program for the general student population in grades 7-12 (1975 through 1985).

In 1972, the program was transferred to the National Institute of Education and the projected work effort as originally conceived was somewhat narrowed in scope. Our major concern at present and the focus of the remaining commentary is the completion of the elementary program for grades K-6.

By August 31, 1975, the status of the elementary program was as follows:

(1) Grades K-1: Two years of extended pilot testing completed. Ready for final revisions prior to publishing.
(2) Grade 2: First of 2 years of extended pilot testing completed.
(3) Grade 3: First of 2 years of extended pilot testing ready to begin.
(4) Grade 4: Outline of development design completed and portions of materials written.
(5) Grades 5-6: Rough outline of development design produced.

The current contract has been negotiated for a 3-year period, ending September 30, 1978, and provides for a 2-year addendum. The program should be completed by September 30, 1980.

Funding. To date, the Federal Government has supported the overall program with an investment of over $7 million (which includes the secondary level materials which are now complete). This program was originally funded in 1967 through the auspices of the U.S. Office of Education. In 1972, the program was transferred to NIE.

Fiscal year 1973	$422,410
Fiscal year 1974	731,964
Fiscal year 1975	549,293
Fiscal year 1976	699,875
Fiscal year 1977	948,215
Fiscal year 1978	1,099,925
Total	4,451,682

Accomplishments. A completed secondary mathematics program for gifted students.

Monitoring history.

Dates	Project officer	Activities
1972- October 1974	Richard Harbeck	Periodic phone calls and correspondence.

Dates	Project officer	Activities
October 1974 to present	Kent Sullivan	Periodic phone calls and correspondence. Site review, Gail Young, mathematics department, chairperson, University of Rochester; Shirley Frye, mathematics coordinator, Scottsdale school system; Jack Churchill, EDC, Massachusetts.

Project ML-GROUP FOR POLICY STUDIES IN EDUCATION

Objectives and strategies. The purpose of this group is to conduct research and evaluation studies of issues and problems relevant to the potential solution of the practical and political problems associated with educational policy formulation and implementation. CEMREL's Chicago research group, reorganized in 1975 as the ML-GROUP for Policy Studies in Education, is currently conducting a 15-month study for NIE titled "Study of Student Achievement Measures as Title I Eligibility Criteria." The study, mandated by Congress to NIE, will be concerned with the feasibility and consequences of basing future title I grants on student achievement.

Funding.

Fiscal year 1976-77 (15-month) *$220,740

*Awarded March 1976.

Monitoring history.

Project officer	Activities
Margot Nyitray, educational equity group	Periodic phone calls and correspondence.

COMPLETED OR TERMINATED NIE PROJECTS

Project INSTRUCTIONAL SYSTEMS PROGRAM

Objectives and strategies. The Instructional Systems program began its initial work as a research-oriented program concerned with problems of instruction and management in classrooms. At this time, 1966 through 1969, the program was known as the Learning Disabilities program The work of the Instructional Systems program evolved from research leads identified as more generally applicable to broader populations of children. Since 1969, the program concentrated upon work in classroom and instructional management and curriculum development in language and cognitive skills for preschool through middle-grade children.

Accomplishments. The result of this research and development work has been the completion of two products, Classroom and Instructional Management (CLAIM) and the Language and Thinking Level I program.

Classroom and instructional management is an inservice training program designed to help teachers acquire skills that will help them reduce the frequency of behavior problems and increase the amount and quality of academic work done by students. The program is based on the findings of behavior analysis. It emphasizes that teachers can change classroom behavior without having to change the entire life situations of students. By changing their own behavior and emphasizing positive classroom interactions, teachers can make the classroom a more pleasant and rewarding place.

The program was tested at 15 sites in Missouri and Tennessee. Over 100 teachers and administrators received the CLAIM training, thus exposing over 1,000 students to the approach. The materials were published in April 1975 by Walker Educational Book Corp.

Language and Thinking Level I is an instructional program designed to develop oral language and thinking and reasoning skills for children aged 3-7. The program consists of 10 instructional packages containing student-activity books, tests, cassettes, transparencies, picture cards, and games.

Language and Thinking Level I presents a sequential system that develops visual and auditory discrimination; develops each child's use of basic language; develops verbal fluency and increases vocabulary; and provides practice in such critical thinking skills as drawing relationships, making inferences, ideas, recognizing incongruities and analogies, making hypotheses, and evaluating situations, events, and actions.

The program was field tested with about 5,000 children in various locations and in a variety of socioeconomic settings. The program was made commercially available by Follett Publishing Co. in the fall of 1974.

The Language and Thinking Level II program was designed to develop learning component skills which are required for comprehension and reasoning in both written and oral forms for elementary students second through sixth grades.

Work on the project was terminated in August 1975 as a result of the recommendation made by a site-review team subsequent to their visit in August 1975.

Table 2. Current non-NIE projects

Project	Objectives and strategies	Status	Funding	Accomplishments
Project ARCH: Gateway to Increased Mathematic Achievement	The prime objective is to increase mathematic achievement through staff development: (1) Teachers in project schools will develop an increased interest in and positive attitude toward the teaching of mathematics; (2) students will gain competence in acquiring and using basic computational skills; (3) students will gain competence in applying computational and conceptual skills in solving problems; (4) students will develop a perception that math is as exciting and interesting as other subject matter; and (5) students will apply computational and conceptual skills in life outside of school.	Staff consists of 20 people, 13 of these are math specialists or assistants at the project schools. Key personnel are James A. Winter, project director; William Cawlfield, project coordinator; Nellie Harrison, program assistant; Elizabeth Thurmond, program secretary; Virginia Proctor, Edith McKinnon, Helene Sherman, math resource specialists. Implementation in 4 school districts which involves 16 schools and approximately 5,000 students. Inservice "staff development" provided by math specialists, assistants, math resource specialists, and project coordinator working directly with teachers responsible for teaching mathematics (K-8).	*$263,412 (July 1,1975 to June 30, 1976) *USOE through a grant under the Emergency School Aid Act (ESAA), Special Mathematics projects. $521,682 (July 1, 1976 to June 30, 1977) Expanded to include one more school district, 30 schools, 15,450 children, K-8.	The final data collection achievement comparisons ha been completed for this sc year; however, early indic are very favorable. Quart reports on the progress of project have been filed an will be a final report in 1976.
Provide Equitable Participation	This program is to "provide equitable participation" for non-public-school students in nonpublic schools located within public-school districts that have title III projects.	The 1975-76 project staff consists of 27 individuals including 22 teachers whose tasks require skills that range from primary teaching to diagnosing learning disabilities, remedial reading, creative arts, communications, motivation, mathematics, behavior modification, and career education to secondary level teaching training.	Since 1972, CEMREL has received contracts for *$1,219,783 for this project. The current year funding is $358,543. *USOE, ESEA title III.	During the 4 years of the CEMREL has provided servic over 15,000 non-public-sch dents in 19 different publ school districts in over ferent non-public-school throughout the State. Sc 1975-76 achievement data be reported until July 19 sults from 1974-75 are en

Table 2. Current non-NIE projects

	Status	Funding	Accomplishments
ease in in- e gain ng n ems; r- ng t tual l.	Staff consists of 20 people, 13 of these are math specialists or assistants at the project schools. Key personnel are James A. Winter, project director; William Cawlfield, project coordinator; Nellie Harrison, program assistant; Elizabeth Thurmond, program secretary; Virginia Proctor, Edith McKinnon, Helene Sherman, math resource specialists. Implementation in 4 school districts which involves 16 schools and approximately 5,000 students. Inservice "staff development" provided by math specialists, assistants, math resource specialists, and project coordinator working directly with teachers responsible for teaching mathematics (K-8).	*$263,412 (July 1,1975 to June 30, 1976) *USOE through a grant under the Emergency School Aid Act (ESAA), Special Mathematics projects. $521,682 (July 1, 1976 to June 30, 1977) Expanded to include one more school district, 30 schools, 15,450 children, K-8.	The final data collection and achievement comparisons have not been completed for this school year; however, early indications are very favorable. Quarterly reports on the progress of the project have been filed and there will be a final report in July 1976.
ui- ub- ic le	The 1975-76 project staff consists of 27 individuals including 22 teachers whose tasks require skills that range from primary teaching to diagnosing learning disabilities, remedial reading, creative arts, communications, motivation, mathematics, behavior modification, and career education to secondary level teaching training.	Since 1972, CEMREL has received contracts for *$1,219,783 for this project. The current year funding is $358,543. *USOE, ESEA title III.	During the 4 years of the project, CEMREL has provided service to over 15,000 non-public-school students in 19 different public-school districts in over 70 different non-public-school sites throughout the State. School year 1975-76 achievement data will not be reported until July 1976. Results from 1974-75 are encouraging

Project	Objectives and strategies	Status	Funding	Accomplishments
		The period of service is from July 1, 1975, to August 31, 1976. Project is carried out in 11 different public-school districts.		
Project Information Package Project (PIP)	The purpose of the project is to provide a continuing search for effective OE-funded projects; e.g., those that work "in the field," using stringent criteria and a rigorous validation process to establish a project's suitability for dissemination; and to prepare a comprehensive Project Information Package (PIP) for the selected projects which will give educators elsewhere the necessary information materials, and guidance to replicate the essential features of the selected projects. The current PIP project identifies effective projects in compensatory and bilingual education with the specific purpose of developing Project Information Packages for them. A maximum of 12 PIP's will be produced: 4 PIP's based on the effective bilingual education projects that have already been selected, and up to 8 PIP's based on effective compensatory education projects. Projects are selected on the basis of the following criteria:	The project was funded for 1 year, June 1975 to July 1976.	A contract for $351,708 from the Office of Planning, Budgeting, and Evaluation of USOE was received on June 28, 1975. It was modified on January 7, 1976, with an increase to $381,487.00 and extended to September 1976 with an additional $65,604 Total: $447,091.	Four bilingual education had been identified as "e plary" by a study conduct the American Institute of search, and approved for nation by the Joint Disse and Review Panel, DHEW. were: Alice, Tex.; Corpus Christi, Tex.; Houston, T St. John Valley, Maine. tion concerning these pro has been gathered through visits, correspondence, a phone calls. The staff h produced guides which giv tailed guidance to all ke members (e.g., project di curriculum coordinator, t evaluator), and descripti all major components of t projects. One of the major tasks of project was the identific of "exemplary" projects i pensatory education. The received from OE over 50 which had passed the Join The criteria for selectio packaging are more rigid

gies	Status	Funding	Accomplishments
	The period of service is from July 1, 1975, to August 31, 1976. Project is carried out in 11 different public-school districts.		
is to for e; e.g., id," d a to bility repare a mation ted ucators ormation repli- of the rent ctive d bi- pecific t In- . A pro- n een based ucation cted on ri-	The project was funded for 1 year, June 1975 to July 1976.	A contract for $351,708 from the Office of Planning, Budgeting, and Evaluation of USOE was received on June 28, 1975. It was modified on January 7, 1976, with an increase to $381,487.00 and extended to September 1976 with an additional $65,604 Total: $447,091.	Four bilingual education projects had been identified as "exemplary" by a study conducted by the American Institute of Research, and approved for dissemination by the Joint Dissemination and Review Panel, DHEW. These were: Alice, Tex.; Corpus Christi, Tex.; Houston, Tex., and St. John Valley, Maine. Information concerning these projects has been gathered through site visits, correspondence, and telephone calls. The staff has also produced guides which give detailed guidance to all key staff members (e.g., project director, curriculum coordinator, teacher, evaluator), and descriptions of all major components of the projects. One of the major tasks of the PIP project was the identification of "exemplary" projects in compensatory education. The staff received from OE over 50 projects which had passed the Joint DRP. The criteria for selection for packaging are more rigid than the

Project	Objectives and strategies	Status	Funding	Accomplishments
	(1) Relevance. Projects serving underachieving poor children in grades K-12 and aimed at producing cognitive achievement benefits in reading and/or math. (2) Availability. Ability of investigators to obtain enough information to validate the project's success and analyze it in depth. (3) Accessibility. Documentation of procedures, results, and costs are available. Project can be visited for validation and program characterization. (4) Acceptability. Conformity to USOE policy on dissemination operational in public schools; not primarily a single commercial project. (5) Cost. Reasonable startup and recurring costs. (6) Educational significance. Achievement gains at least one-third of a standard deviation greater than expectations based on national norms or control-group scores. (7) Statistical significance. No more than 1 chance in 20 (p .05) that the observed gains could be due to chance. (8) Support by USOE funds. Projects must previously have been, or currently be, receiving assistance from a USOE program, such as Right to Read, title I, title III, etc.			DRP standards and careful sis (and, in many cases, sis) of the data was requi Six projects have been ide for PIP's.

gies	Status	Funding	Accomplishments
ding in ducing ts in in- in- oject's pth. ation costs be rogram ty to s; not l pro- p and . ne- n great- n oup . No .05) d be Projects r cur- nce Right etc.			DRP standards and careful analysis (and, in many cases, reanalysis) of the data was required. Six projects have been identified for PIP's.

Project	Objectives and strategies	Status	Funding	Accomplishments
	(9) Replicability. Some successful educational programs rest primarily on the efforts of a small group of people or are rooted in a typical local condition. While such successes are not to be denigrated, it would be ineffective to attempt replication of the approach. Consequently, the choice of projects to be packaged must be made by considering whether the success can be attained under other than the original circumstances. Such considerations include an assessment of whether the major components—personnel, materials, hardware, and environments—can be duplicated. After gathering program characterization data, CEMREL will write draft versions of the PIP's and submit them to the USOE, to an advisory committee, and to the local project directors for review as to the accuracy, completeness, and appropriate assignment of priority to program essentials. Finally, CEMREL will package the project description in such a manner that likelihood of it's being implemented by other school districts is maximized.			
Classroom Processes	This study is devoted to the description and analysis of classroom			

rategies	Status	Funding	Accomplishments
successful t primarily l group of a typical such suc- igrated, it attempt rep . Con- projects ade by con- cess can be n the Such con- ssessment ponents— rdware, and licated. characteri- write P's and to an ad- the local view as to s, and f priority Finally, roject de- r that imple- stricts is			
the de- classroom			

Project	Objectives and strategies	Status	Funding	Accomplishments
	processes. The research team will look closely at classroom teaching and learning settings, including the amount of time spent on specific subject-matter areas, group and individual work, and teacher supervision. They will study the pupils' allocated instructional time and what they are studying and will tie these to teacher activities and what pupils learn and achieve. The study is being performed by CEMREL's ML-GROUP for Policy Studies in Education.		*$33,350 (November 1975) *The Spencer Foundation, Chicago.	
Cooperative Education Project	This 2 year project, to be conducted with the Missouri Historical Society will develop educational materials for children, focusing on Eads Bridge, its impact on the community and the genius of its architect. Children will have direct experience with historical artifacts which give clues to the cultural, historical, and aesthetic values of the late 19th Century in St. Louis. The children will develop an understanding of the process of change and of motives which underlay change in the past. The project will serve as a model for other communities. Also involved are the St. Louis Engineers Club, the Museum of Science and Natural History, the St. Louis Public Library and 5 school districts.	The project is funded for 2 years (May 1, 1976 to April 3, 1978).	*$77,791 * National Endowment for the Humanities.	

es	Status	Funding	Accomplishments
ill ing g cif- r ne n g .		*$33,350 (November 1975) *The Spencer Foundation, Chicago.	
ucted ciety als nity . ience give al, e tand- d of n the a lso neers Nat- lic	The project is funded for 2 years (May 1, 1976 to April 3, 1978).	*$77,791 * National Endowment for the Humanities.	

CENTER FOR EDUCATIONAL POLICY AND MANAGEMENT

Mission

The Center for Educational Policy and Management was established in 1973 through the merger of five existing units at the University of Oregon: The Center for the Advanced Study of Educational Administration (CASEA); the ERIC Clearinghouse on Educational Management; and the departments of educational administration, higher education, and educational policy within the college of education. These units shared a common orientation to the formation of educational policy and the management of educational institutions. Each could retain its original identity while assuming additional responsibilities within the framework of the center.

From the inception of CASEA in 1964, through the reorganization of five components into CEPM, and continuing at present, the mission of the center has been that of improving the organizational functioning of elementary and secondary schools. This mission has led us to investigate local problems and to build technology to help schools and systems solve local problems more systematically. At the same time, we believe that one of the duties of a center such as ours is to make it easier for personnel to encounter all kinds of ideas about alternate goals and ways of reaching them. We believe that the work of schools takes place primarily within the organizational matrix, and that the potentialities for maintaining or changing the educational experience of students are inextricable from the organizational context. This belief has led us to investigate some ways of enabling schools to alter their organizational procedures, norms, and structures.

The center attempts to serve as a viable and responsive link between researchers and practitioners in the field of educational administration. Through its instruction and field services division and information services division (ERIC Clearinghouse), the center provides ready access to current research and development efforts in the field and insures that the work of researchers and scholars in the research and development division (CASEA) remains responsive to the changing needs of practicing educators.

Within the research and development division of the center, six separate programs are currently exploring different ways to optimize the organizational structure and improve instructional programs of elementary and secondary schools. This emphasis is the result of a historical focus on issues related to educational administration. Throughout the 10-year history of the research and development division (CASEA), personnel at the center have studied the dynamics of organizational change; the effect of change on school personnel, particularly administrators; the improved preparation of educational administrators; and the design of procedures to assist schools to become more responsive to their clientele and to improve their operations. In summary, the work of the center has focused on the governance of elementary and secondary schools, the change in that governance, and the work systems which comprise educational institutions. It is these foci which the center intends to keep paramount in the future.

The emphasis in the center since its inception has been programmatic research. The center has developed products for use by practitioners, but by and large these efforts have been in the support of research. In its research, the center has attempted to maintain a strong core of social scientists representing several fields of inquiry. This cross-disciplinary background of the staff represents one of the most potent resources in the center.

Finally, the services of the University of Oregon constitute another substantial resource. For 10 years, the university has maintained a strong financial commitment to the work of the center. This commitment has resulted in a contribution of 5 percent of total contract value. This has enabled the center to maintain a solid core of support and a degree of flexibility which would be impossible without that support.

Governance

CEPM is one of three divisions of the college of education. As such, it is an integral part of the college and is responsible through the dean and the vice president for academic affairs to the president of the university. In turn, the president is responsible to the State board of higher education through the office of the chancellor. CEPM is subject to the rules and regulations of the State board of higher education and the administrative policies of the university.

Management

CEPM is comprised of three divisions: The ERIC Clearinghouse on Educational Management, the research and development division, and the instruction and field services division. Overall responsibility for management of the center is invested in the associate dean for educational policy and management. Each of the three divisions in CEPM are managed by a division director who also serves as associate director for the entire center. The research and development division, in turn, is subdivided into six programs, each with a program director. The program directors report to the director of the division, who in turn reports to the associate dean.

In the research and development division (CASEA) each program is self-contained in the content of its work. In programs where evaluation is a necessary part of the program, evaluation is contracted on a program-by-program basis. In programs where field data are required, these data are collected either by program staff members or under terms of a subcontract or to an outside agency.

Autonomous evaluation within programs, however, has not always been the case. The center formerly contained a separate evaluation component which provided evaluation services for all programs in the center. Similarly, a graphic artist and editorial assistants were employed by the center, and dissemination was conducted by staff members supported by the center as a whole. Due to cuts in funds, it was necessary to eliminate some of these services from the center. Therefore, it has been necessary to move to a mode of operation which provided specific services on a program-by-program basis as was required in the respective programs.

Although programs function separately from each other, a strong central focus is maintained. All proposed work is reviewed by a committee to insure that the work is consistent with the center's mission and a high level of quality is maintained. In addition, standing committees on faculty personnel, student personnel, program, and salaries recommend action on centerwide policies. The work of these committees is coordinated by a coordinating committee, representing the R. & D. division, the instruction and field services division, ERIC, and the college of education's field training and service bureau.

One other central management function, in addition to those identified above, is still provided to all programs in common. That function is the business management of the center. Currently, a full-time business manager and an administrative assistant are employed to handle the business affairs of the entire center.

When CASEA was first established, a national advisory body was formed to assist center staff members in selecting fruitful topics for research and development. When the Federal Government established the program-purchase policy, the advisory body was deemed unnecessary because the locus of decisionmaking had been transferred from the center to the funding agency. Currently, no advisory body exists for the center. In the R. & D. division, each program has employed both technical and substantive consultants and has been subject to site reviews conducted by external reviewers and the NIE.

Staff

The figures reported below reflect the composition of the staff in the research and development division only.

The professional staff of the division includes 21 professional staff members. Of this number, 14 hold the Ph. D., 5 hold a master's degree, and 1 holds the bachelor's degree. Among those who hold the doctorate, the following fields of inquiry are represented: Psychology, social psychology, curriculum and instruction, guidance, educational administration, sociology, political science, and anthropology. Of the 21 professional staff members, 7 are women and 3 are minorities. Nine of the staff members hold joint appointments in academic departments in the university. These departments include psychology, educational psychology, curriculum and instruction, educational administration, political science, and anthropology.

Clerical and support staff for the division includes seven secretarial staff members. In addition, two persons work in the business area and their duties also include the business function for the entire center.

Finally, two additional persons are employed in the R. & D. division. These include a part-time editor, the major portion of whose time is devoted to working in the ERIC division, and a librarian. The librarian is responsible for maintaining a resource center for use by program staff.

Seventeen doctoral students are employed to work on the six programs in the R. & D. division. The fields of study represented by these students include educational administration, political science, psychology, educational psychology, sociology, and anthropology. These graduate students are employed up to 0.5 FTE, depending on the nature of the work required.

Staff Development

Faculty members participate in staff development programs regularly. Workshop and conference attendance is encouraged within budgetary limitations. Some faculty members enroll in university courses and individual staff members serve on a variety of State and National professional committees.

Staff members are in constant demand for presentations and consultations concerning their work at the center. Such presentations provide opportunities not only to present information and data about work under way in the center, but also to meet colleagues around the Nation to discuss and study issues of mutual concern. This enables staff members not only to share their expertise, but also to acquire new skills.

The center's resource center provides a ready reference for students and faculty to current topics under study. Any staff member may request the purchase of books and materials for addition to the resource center.

For classified personnel, a formal program of staff development was instituted during the academic year 1975-76. The topics considered in this program span the entire range of concerns to classified personnel. In general, staff-development sessions are conducted by university-based personnel secured at no cost to the center. Topics considered include technical aspects specific to the several types of positions represented in the center, information concerning State civil-service regulations, affirmative action programs, and general information sharing.

Another cooperative arrangement has been designed for a number of individuals over a 10-year period. This arrangement has ordinarily been designed for established scholars to spend their sabbatical leaves in the center. This arrangement provided the opportunity for staff members to interact with visiting scholars and provides a staff development potential to the center. In this way, the visiting scholar benefits from his or her contact with the research and development under way in the center and staff members are benefited from the exchange of ideas from visiting persons.

Training Provided to Others

Early in the history of CASEA, postdoctoral fellowships were awarded to scholars to enable them to study at the center for 1 academic year. Over 3 years, 18 postdoctoral fellows were trained. Training in this program included additional course work and individual studies.

In each academic quarter of the year, the center sponsors an executive in residence. This is typically a local school or business executive who spends one or more days in the center, getting to know the programs under way in the center, and exchanging views with center personnel. This provides not only a good avenue for disseminating information about the work in the center, but also provides a mechanism for constant interaction with practicing administrators.

As a part of the center's development programs, a large number of administrators and teachers have been trained in a variety of ways. In the strategies of organizational change program, several hundred persons have been trained in the techniques of organizational development. The SPECS program has resulted in training for nearly 500 administrators and teachers throughout the Nation. Finally, our work on the Ernstspiel and Ariole Kits has resulted in a large number of trained personnel, not only in this country, but abroad as well.

Institutional Relationships

Several different types of relationships exist. First, by virtue of our organizational structure, the R. & D. division is intrinsically related to both the ERIC network and the teaching function performed in the center. This enables the personnel working in research and development and the results of their work to have immediate impact upon practicing administrators and to link immediately with the dissemination capacity represented in ERIC.

Secondly, the center is a member of the Council for Educational Development and Research (CEDaR). This enables center personnel to maintain a continuing dialog with other research and development centers and educational laboratories about problems, practices, and future direction of the Nation's educational R. & D. capacity.

Third, the center is a member of the University Council for Educational Administration (UCEA). This affiliation provides a forum for examining the practice of education administration, for plotting future directions for research and development in the field, and for relating to other institutions preparing educational administrators. UCEA provides the vital link between all the major universities in the Nation studying the practice of educational administration and preparing future administrators.

Fourth, as a part of the conduct of research and development, several networks which are program related have been developed. School districts which participate in the work of specific programs become a part of a network which furthers the work involved in the respective programs. These networks are ordinarily established for a short period of time and for a specific focus. As a result, over a period of years, several hundred school districts, State departments of education, and universities have been involved in the center's work and continue to look to the center for leadership in the study of educational administration.

Table 1. Funding history

April 1, 1964 through November 30, 1976

Activity	Period of time	USOE	NIE	Subcontracts	University Funds	Royalties	Sale of Publications	Total
R. & D.	Apr. 1, 1964–Nov. 30, 1972	5,209,089						5,209,089
	Dec. 1, 1972–Nov. 30, 1973		890,000					890,000
	Dec. 1, 1973–Nov. 30, 1974		833,531					833,531
	Dec. 1, 1974–Nov. 30, 1975		785,939	*160,000				945,939
	Dec. 1, 1975–Nov. 30, 1976		605,597	***369,223				974,820
Cost Sharing	Dec. 1, 1964–Nov. 30, 1972				1,091,267			1,091,297
	Dec. 1, 1972–Jun. 30, 1974				204,142			204,142
	Jul. 1, 1974–Jun. 30, 1975				128,786			128,786
	Jul. 1, 1975–Jun. 30, 1976				154,358			154,358
ERIC	Jun. 1, 1966–Dec. 31, 1972	1,054,660						1,054,660
	Jan. 1, 1973–Dec. 31, 1974		314,172					314,172
	Jan. 1, 1975–Dec. 31, 1976		399,626					399,626
Sales	Jul. 1, 1966–Nov. 30, 1972						28,074	28,074
	Nov. 1, 1972–Jun. 30, 1973						6,514	6,514
	Jul. 1, 1973–Jun. 30, 1974						10,936	10,936
	Jul. 1, 1974–Jun. 30, 1975						11,819	11,819
	Mar. 27, 1975.					**5,648		5,648
	Jul. 1, 1975–Mar. 10, 1976						10,941	10,941
Total		6,263,749	3,828,865	529,223	1,578,553	5,648	68,284	12,274,322

*Subcontract with Center for New Schools, Chicago, Ill. Funds derived from NIE.

**Royalties are credited to the University of Oregon. The $5,648 represents the amount transferred by the university to CEPM.

***Subcontracts with Center for New Schools and Oregon Research Institute. Funds derived from NIE.

Table 1. Funding history

April 1, 1964 through November 30, 1976

	USOE	NIE	Subcontracts	University Funds	Royalties	Sale of Publications	Total
72	5,209,089						5,209,089
73		890,000					890,000
74		833,531					833,531
75		785,939	*160,000				945,939
76		605,597	***369,223				974,820
972				1,091,267			1,091,297
974				204,142			204,142
975				128,786			128,786
976				154,358			154,358
972	1,054,660						1,054,660
974		314,172					314,172
976		399,626					399,626
972						28,074	28,074
973						6,514	6,514
974						10,936	10,936
975						11,819	11,819
					**5,648		5,648
976						10,941	10,941
	6,263,749	3,828,865	529,223	1,578,553	5,648	68,284	12,274,322

ols, Chicago, Ill. Funds derived from NIE.
sity of Oregon. The $5,648 represents the amount transferred by the university to CEPM.
ools and Oregon Research Institute. Funds derived from NIE.

Fifth, an informal but important network has evolved as a result of the center's publication program. This network of publication purchasers forms a core of support and a vital dissemination link for the center. This network represents a group of people who continually look to the center for leadership and demonstrates that the work of the center is valued throughout the Nation.

Facilities The research and development division is housed, along with the instructional division, in a 14,000-square-fooot building located adjacent to the University of Oregon campus. Office space, classrooms, conference rooms, and the resource center are located in this facility. CEPM occupies this building under a 3-year lease negotiated by the university for the sole purpose of housing CEPM. Computer facilities, printing equipment, and major library resources are maintained by the university and are used regularly by CEPM staff members.

CURRENT NIE PROJECTS

Project DOCUMENTATION AND TECHNICAL ASSISTANCE PROJECT (DTA)

Objectives and strategies. This project is being carried out collaboratively by the center and by another group, Center for New Schools, Chicago. The latter is the contractor, and legally CEPM is a subcontractor. In practice, an Oregon senior researcher serves as codirector of the project, and center staffs are mingled at all levels on task teams. The objectives of the contract are to carry out studies of nine organizational change projects in urban schools, and to link that research to people in other schools who can benefit from the experience gained in the nine original activities. Basic strategies of the project include intensive qualitative research on organizational functioning and strategies for change; face-to-face technical assistance as the mode of knowledge transfer, and commitment to a feedback loop connecting work with users to future data gathering so that research can increasingly serve user needs. Center staff members are active in every aspect of the work; three onsite researchers employed by CEPM are doing three of the nine field studies; a senior center person supervises them and serves as a key member of the project's analysis staff; all data are coded by staff at Oregon; product design is centered at Oregon; the entire technical assistance effort with users, while to be carried out in several places and involving staff of both centers, is directed by the project codirector, who is a senior person at Oregon.

Status. The project has been funded by NIE since January 1975. Early months involved making agreements with the nine projects to be studied in depth, recruiting field researchers, and establishing data systems. Starting in fall 1975, potential users have been located and initial explorations with them begun, leading to firm agreements in the spring of 1976 with schools and other users in Oakland and Chicago. The project was refunded in December 1975, for another 12 months. A full review of the first 18 months is planned for the spring and summer of 1976, leading to new plans for the second phase, September 1976 to August 1977 and beyond. Field research will be completed by the end of 1976-77, and various types of technical assistance based on the findings will assume greater importance in the last 2 years of the contract. The project will end December 1979.

Funding.

Fiscal year 1975	$ 500,000
Fiscal year 1976	921,460
Total	1,421,460
CEPM Subcontract:	
Fiscal year 1975	145,000
Fiscal year 1976	296,000
Total	441,000

Accomplishments. After 15 months of a 60-month project, few "major accomplishments" can be reasonably expected. To date, major milestones have included developing good relationships with nine highly diverse and sometimes intransigent urban school change projects, to allow intensive and closeup field study and development of initial relations with central office and school staffs in two user communities, also urban and intense, Oakland and Chicago. A complex data-management system, including computer storage and indexing of field-note test, is near completion and about to be called on for use in analysis. All major components of a large and geographically dispersed effort seem to be in place and approaching productivity.

Monitoring history.

Dates	Project officer	Activity
January 1975 to present	Fritz Mulhauser group on school capacity for problem-solving	1. February 1975, site visit to Chicago. 2. April 1975, project staff visit NIE. 3. July 1975, attend project management meeting. 4. August 1975, site visits to both Chicago and Oregon. 5. September 1975, site visit to Chicago. 6. October 1975, project chief visits NIE. 7. October 1975, attend project management meeting. 8. November 1975, project chief visits NIE. 9. February 1976, attend project-management meeting. 10. March 1976, project chiefs visit NIE. 11. April 1976, project chiefs visit NIE. 12. April-May 1976, field review; debriefing in Chicago with project staff, NIE, reviewers.

When the project required refunding for the second period of 12 months, written plans were reviewed by a panel of four people from outside the sponsoring NIE office. A review including site visits is underway in April-July 1976 and includes four people from outside NIE. The project has engaged its own reviewers who critique documents and attend major planning sessions, including the February 1976 session listed above, and several with NIE reviewers and project staff.

Project MANAGEMENT IMPLICATIONS OF TEAM TEACHING (MITT)

Objectives and strategies. This project is a longitudinal study of the implementation and effects of team teaching. About 20 schools adopting the Individually Guided Education (IGE) multiunit organizational design in fall 1974 were studied before implementation, and twice a year for the following 2 years of implementation. A similar number of traditional schools in the same districts are being studied as controls. The main study aims to separate two kinds of effects which are presumed to follow from changing the structure of the school by creating teams. These two different effects are, on the one hand, increased interdependence of teachers, as they share students for instruction and, on the other hand, increased control over school decisions by groups of teachers acting in teams or units. Either or both of these results could contribute to the enthusiasm teachers show in team-organized schools, and it is the goal of the research to replicate the findings of improved teacher morale, and untangle the antecedents of this observation. A secondary goal of the study is to identify characteristics of the schools which predict the nature and rate of implementation of teaming. The main study derives from ambiguous results of earlier work at Stanford in the Environment for Teaching program and also at the center as well. The implementation study builds on a longstanding interest of the Oregon Center in the process of innovation. Data taking is done by interview and questionnaire, using unique measures of decisionmaking structure and teacher interdependence developed for this study. Extensive and creative attention has been paid to maintaining the cooperation of 40 schools over 3 years of data taking.

Status. The project has been funded by NIE since 1972. The master lab and center review panel in 1972 recommended an initial trial year of work, to be followed by another review. Based on an enthusiastic review in October 1973 of the prior year's efforts, a 3-year contract was issued, to end in November 1976 with another review. The project has always sought a 5-year time frame, and made clear in the RAMP for the present contract that much work would be only partially completed by fall 1976, probably requiring fiscal year 1977 funds to finish. As of May 20, 1976, it appears that fiscal year 1977 funds will be available to complete the project as planned. A review by the project in spring 1976 was based on several early waves of data, contained in a technical report. The additional funds will allow completion of analysis of all five waves of data. Dissemination of findings to interested people in schools and to team-teaching facilitators is also planned for 1976-77.

Funding.

Fiscal year 1973	$103,300
Fiscal year 1974	245,763
Fiscal year 1975	280,484
Fiscal year 1976	310,274
Total.	939,821

Accomplishments. The project is not finished, so significant findings are not available. Early data show that some "control" schools are as interdependent as "experimental" ones, which was unexpected. A technical report on early data, and the instruments, has been completed. Several conference papers on the study have been given, also. At least two monographs will eventually result from the study. No dissertations have used the data. The findings, when completed, will be of interest to all those involved in team teaching, and discussions with IGE developers and facilitators have already proved this.

Monitoring history.

Dates	Project officer	Activity
1972		1972 review, Panel A (Iannaccone, Austin, Brickell, Burlingame, Corwin, Radnor).
February 1973 to October 1974	Spencer Ward, office of research, program on teaching and curriculum	1. February 1973, site visit. 2. May 1973, site visit. 3. October 1973, site visit with

Dates	Project officer	Activity
		consultants R. Corwin, L. Iannaccone, J. Grannis, S. Molnar. 4. March 1974, site visit. 5. Extensive written inquiries and responses.
October 1974 to May 1975	Sandy Pemberton, office of research, basic studies—program on institutional effects	No visits, little correspondence.
May 1975 to present	Fritz Mulhauser, group on school capacity for problem solving	1. February 1975, site visit. 2. August 1975, site visit. 3. October 1975, project director visits NIE. 4. February 1976, site visit during conference set up by project, with invited guests Grannis, Corwin, and J. Meyer. 5. March 1976, project director visits NIE.

In the original resource allocation management plan (RAMP), milestone reviews by external people were set at annual intervals, in fall 1974, 1975, and 1976. The first review was changed almost immediately, as data were not ready for analysis, reporting, and review on the hoped for schedule. A new review date of spring 1975 was set by both old and new project officers, but was not met because the NIE office had budgeted no funds, and the report was also not ready. SCPS did not budget for any outside review in fiscal year 1976, thinking that with the project close to ending, a review made little sense. With a technical report ready in early 1976, the project scheduled its own review in February 1976, with two of the original three project reviewers and a third from the same project as the orignial third reviewer—Stanford's Environment for Teaching project.

Project THE RESPONSIVENESS OF PUBLIC SCHOOLS TO THEIR CLIENTELE

Objectives and strategies. This project's major purpose is to evaluate the effects of alternative patterns of school-district governance on the ability and willingness of districts to respond to their constituents' demands. More specifically, the project is analyzing the responsiveness of four types of governance patterns—hierarchical, bargaining, polyarchical, and market. In a sample of 11 districts, distributed across the 4 types of governance structure, the project has surveyed the preferences of constituents for educational services, prepared "demand/response" logs of requests made by constituents, and prepared case studies of response patterns. The results of these data-gathering and analysis efforts will include an extensive pool of data on educational decisionmaking and governance and detailed analyses of relationships between school-district organization and responsiveness. These analyses will be reported in a variety of papers, articles, and a monograph. Finally, project personnel are planning effective ways to disseminate findings to school-board members, administrators, and others who might use them in school-district planning, decisionmaking, and improvement efforts.

Status. On the basis of a review of this project's basic program plan by the specialist and master panels in the 1972 lab/center review, this project was first awarded a 1-year contract for the period December 1, 1972, through November 30, 1973. The purposes of the work in the first year were to review the theoretical and empirical literature on the responsiveness of public institutions to their clientele and to develop a research plan, including theoretical propositions and models of school-system responsiveness. The results of this initial review and planning work were evaluated by both NIE staff members and four external experts in the fall of 1973. As a result of that review, the project was awarded a 3-year contract for the period December 1, 1973-November 30, 1976. During the first 2 years of this present contract, the project staff developed instruments and collected data in 11 school districts representing the 4 theoretical models developed in the first year. In the third year of the present contract (December 1975-November 1976), the project is analyzing various aspects of the data, including relationships between school-district organization and responsiveness, patterns of decisionmaking style, effects of varying community-opinion environments, and patterns of communication. Also, the project intends to prepare data banks and guides to their use so that other researchers will be able to further analyze the data.

By decision of the NIE director in August 1975, certain additional work was solicited from several CEPM projects, including this project. The CEPM staff, in consultation with the staff of the school capacity for problem solving (SCPS) group, decided to earmark approximately $39,000 of the center's additional fiscal year 1976 funds for this project but to postpone their official request for these additional funds until plans for their use can be finalized. The project has indicated that such funds will be used for important additional analyses and for various approaches to dissemination of the research results to school-board members, administrators, and others who may benefit from them. The project will submit plans for use of the additional funds in May 1976. At that time the SCPS staff will review the plans and, if they are found acceptable, will request that an appropriate additional fiscal year 1976 allocation be given to the project. Such an allocation will constitute the project's final funding and will carry the work into the summer of 1977.

Funding.

Fiscal year 1973	$46,800
Fiscal year 1974	164,289
Fiscal year 1975	166,500
Fiscal year 1976	139,472
Total.	*517,061

*As indicated above, an additional $39,000 or more in fiscal year 1976 funds may be awarded to the project in the spring or summer of 1976, depending upon the quality of the plans that are submitted in May.

Accomplishments. During the initial 1-year contract, the project's most significant products included (1) a comprehensive review of the social-science literature on the responsiveness of public institutions to their clientele; (2) an inventory of theoretical propositions relating various structural properties of public-school systems to client demands; and (3) several formal models of "responsive" school systems (models which describe alternative patterns of educational reform and which predict the effects of such reforms under a variety of conditions). The first product (the review) provided the basis for a major article in the 1974 Political Science Annual: "The Decision-Making Culture of American Public Education," by Harmon Zeigler, M. Kent Jennings, and G. Wayne Peak. Project personnel are presently preparing a number of articles, reports, and papers based upon their analyses of the data collected in 1974 and 1975. One such paper, "Communication and Decision-Making in American Public Education: A Longitudinal and Comparative Study," was delivered during the April 1976 annual meeting of the American Educational Research Association (AERA).

Monitoring history.

Date	Project officer	Activities
1972		Review, Panel A (Austin, Brickell, Burlingame, Corwin, Radnor, NIE Staff).
March 1973 to July 1973	Wilmer S. Cody	Participation in initial review of basic program plan; establishment of first contract; periodic phone calls, letters, review of materials.
July 1973 to April 1974	Lila Carol	Periodic phone calls, letters, review of materials and milestone reports, and site visits. A major review of the first year's work was conducted in August 1973. The reviewers included: Ralph B. Kimbrough (University of Florida), Conrad Briner (Claremont Graduate School), Israel Tribble (Mills College), Frank J. Munger (University of North Carolina), Paul Hill (NIE), Flora Ortiz (NIE), and Martin Burlingame (NIE).
April 1974 to April 1975	Martin Burlingame	Periodic phone calls, letters, review of materials and milestone reports, and site visits.
April 1975 to present	Jon Schaffarzick	Periodic communications through phone calls and letters; met with principal investigator

several times during April 1975 meeting of all SCPS contractors at Airlie House, Virginia; reviews of 3 milestone reports; comprehensive review of project's progress and plan for fiscal year 1976 in preparation for continuation beyond November 1975.

Project SPECS PROGRAM

Objectives and strategies. The SPECS program is developing a set of procedures and materials that a school district's staff can use to plan, evaluate, and replan school programs; determine the public's overall expectations of its schools; and periodically assess the degree and quality of match between program outcomes and public expectations.

Status. Begun in 1969 under the title "PPBS in Schools--Organizational and Client Consequences," the SPECS program is now in its final year, with funding scheduled to end in August 1976. By the end of the current year, the SPECS program plans to have completed implementation manuals for each of its five components; classroom materials; a brochure and several types of analyses (e.g., cost implications) for potential users; a chronology for field-test events; and a set of cross-site generalizations about the field-test experiences.

In 1972, CEPM (then CASEA) staff proposed a 5-year plan for the PPBS program, but the NIE policy at the time was to limit contract to only 3 years. At a major review of the program in January 1974, both the external reviewers and NIE staff encouraged CEPM to expand the development portion of the program as well as the research activities. Additional staff members were hired and an expanded scope of work was prepared.

Later in that year, however (as NIE had to confront the reduced fiscal year 1975 appropriation) a new set of directions was conveyed to CEPM--the SPECS funding would have to be decreased, thereby requiring the virtual elimination of the research portion of the program (for which new staff had already been hired). Despite this cut in the 1975 funding, SPECS staff understood from their NIE project officer that the development activities would continue through fiscal year 1977.

After some confusion resulting from an NIE internal reorganization, CEPM staff discovered in December 1974 that SPECS was not included in the institute's tentative 1976 budget. When it finally became clear that the SPECS program would be the responsibility of the finance and productivity group, SPECS staff initiated discussions about the future of the program with personnel in that group. Once again, the program's fate was subject to delays and ambiguities resulting from larger NIE policy issues. Although NIE's finance and productivity staff had recommended that SPECS be continued for 9 months in fiscal year 1976 to complete the development work, the final decision was held up at NIE pending the formulation of uniform NIE policy for funding labs and centers in fiscal year 1976. By the time the funding decision was finally made in the summer of 1975, two key SPECS staff members had left for other positions.

In November 1975--at the time that the contract for the remaining 9 months was negotiated--responsibility for the SPECS program was transferred to the school capacity for problem solving group.

Funding.

Fiscal years 1969-72	$151,692 (USOE)
Fiscal year 1973	486,256
Fiscal year 1975	205,000
Fiscal year 1976	120,032
Total.	962,980

Accomplishments. The program has already published an attractive monograph which provides an overview of SPECS; classroom materials; a report on teacher/administrator perceptions of SPECS in two school districts; and two implementation booklets for component IV, "Community-Based Broad Goal Definition " By the end of the current contract, the program will also have implementation manuals for the other four components.

Based on the field-test experience in a number of school districts, the program also plans to prepare and publish--

- A descriptive brochure for potential users;
- A consultant's manual;
- An elaborated chronology of field-test events;
- A set of cross-site generalizations from the field testing;
- An analysis of data for consumer information use; and
- An ethnography of the implementation process in one pilot-testing district.

Monitoring history.

Dates	Project officer	Activities
1972		Review, Panel B (Hopkins, Jaeger, Kaufman, Krathwohl, staff).
January 1973 to April 1974	George Carnett, governance, organization, and management task force	January 1973, 1-day site visit by NIE task force director. October 1973, 2-day training session at Knoxville, Tenn.; NIE project officer. January 1974, 1-day site visit, NIE project officer. January 1974, 2-day review in San Francisco, Calif., 3 NIE staff and 4 outside consultants.
April 1974 to June 1975	Martin Burlingame, office of research and exploratory studies	January 1975, visit by SPECS staff to Washington.
	Group on finance and productivity	March 1975, visit by SPECS staff to Washington.
July 1975 to November 1975	Judith Segal (unofficial), group on finance and productivity	
November 1975 to present	Saul M. Yanofsky, group on school capacity for problem solving	December 1975, 1-day visit by associate director of group. December 1975 to March 1976, several visits by project director to NIE.

Project STRATEGIES OF ORGANIZATIONAL CHANGE

Objectives and strategies. This project's primary objective is to develop and refine a strategy for helping school organizations to become more capable of using their own resources to solve their own problems. The particular strategy under investigation is organization development (OD), a system in which people in schools and districts engage in assessing, diagnosing, and transforming their own organizations rather than simply accepting diagnosis and prescription from outside experts. OD enables these people to assess and improve communication patterns, such aspects of their organization as relationships between individual and group goals, climates for decisionmaking, and the effects of reward systems on morale.

The project is doing both research and development with respect to OD. On the research side, it is testing particular theories about organizational conditions, OD designs, and organizational outcomes in relation to self-renewal. On the development side it is creating, testing, and packaging training designs and techniques for others to use. The project's research and development products are based upon work in several schools and school districts in the past 10 years. The current contract calls for study of the effects of using OD, comparisons of OD with another type of training, and a study of how groups ("cadres") of OD specialists are established in school districts.

Status. NIE began funding this project on March 1, 1973. The project at that time represented a combination of CEPM projects that had been in operation since 1967. Originally, the project was scheduled to complete its work on November 30, 1975. In early 1975, however, the principal investigators won a major subcontract (on the DTA project, also funded by the school capacity for problem solving group) and, therefore, their percentages of time devoted to this project and the time lines for the project's work units had to be modified. The project requested and was granted a no-cost extension through June 30, 1976. All but three of the project's scheduled products have been completed. These final three products are well under way and the most recent progress reports indicate that all work will be completed by June 30.

Funding.

Fiscal year 1973	$326,738
Fiscal year 1975	120,000
Total	446,738

Accomplishments. Since its beginning in 1967, the project has produced (1) 7 books and monographs; (2) at least 41 articles, technical reports, and papers; and (3) at least 8 sets of training aids and packaged exercises for OD specialists and other practitioners. The books and monographs include: Handbook of Organizational Development in Schools, Organizational Development in Schools, Organizational Development for a School Faculty, Organization Development: Building Human Systems in Schools, The Development of Educational Teams, Consultation for Innovative Schools, and Organizational Specialists in a School District: Four Years of Innovation. Another major product is an audioslide presentation entitled "Organizational Development in Schools." The project has established cadres of specialists in two west coast cities. Since then, similar organizations have sprung up in other west coast cities and a Canadian provincial department of education.

Monitoring history.

Detes	Project officers	Activities
March 1973-September 1973	Wilmer Cody	Periodic phone calls, letters, reviews of materials, and site visits.
September 1973-June 1974	Lila Carol	Periodic phone calls, letters, reviews of materials, and site visits.
June 1974 to present	Jon Schaffarzick	1. Periodic phone calls, letters, and reviews of materials. 2. July 1974, 2-day site visit; NIE staff only. 3. September 1974, mail review of project's products, research designs, and plans; reviewers: Matthew Miles, Barry Anderson, Daniel Cheever.

Project COOPERATIVE DISSEMINATION AND LINKING AGENT TRAINING PROJECT

Objectives and strategies. This is one part of the project representing the cooperative effort of eight labs and centers. Goals of the project are: (1) To provide more effective dissemination of materials and knowledge developed by lab/centers in the area of educational planning, management, and change support; and (2) to make available coordinated materials and training resources to linking agents. Strategies to be used include: (1) Collecting, describing, and integrating the set of resources in a form which permits selection of useful materials; (2) orienting, training, and building a support system around the set of resources; and (3) preparing, responding to, and revising technical/conceptual papers.

Status. This project began in fiscal year 1976 and is expected to continue in fiscal years 1977 and 1978. This activity is a dissemination component of the strategies for organizational change program funded from the school capacity for problem solving group. The three CEPM divisions deal with R. & D., communication, and training related directly to educational administration and educational change. The center has done development leading to Ernstspiel, the SPECS materials, and an OD handbook. The CEPM activities most immediately related to linking are those in the strategies for organizational change program, but the project expects to utilize materials and knowledge produced by other CEPM programs also.

Funding.

Fiscal year 1976 . . . . . $35,818

Accomplishments. This dissemination activity has just begun. The project expects to have five or six lab and center staff ("resource specialists") who can provide an orientation to the entire set of materials by June 1976. Each of the five or six staff will collect a total set of the materials. The project will provide eight orientations in 1976.

Monitoring history.

Dates	Project officers	Activities
December 1975 to present	Spencer Ward, dissemination and resources group	1. Frequent phone contacts with project staff.

Dates	Project officers	Activities
December 16, 1975		2. First formal meeting of all 8 lab/center representatives, and 2 NIE staff.
March 1-5, 1975		3. Meeting at Far West Laboratory to obtain overviews of each of each of the 8 lab/center products and to plan further project activities; 2 consultants (David Elliott, David Crandall); NIE monitor; and representatives of the 8 lab and centers attended.

COMPLETED OR TERMINATED NIE PROJECTS

Project MANAGEMENT UTILIZING STAFF TRAINING (MUST)

Objectives and strategies. The primary objective of the management utilizing staff training (MUST) program was to produce, test, and disseminate integrated sets of instructional materials. These materials were to be designed to provide intact work groups within schools with the knowledge and skills necessary to cope with the specific organizational and managerial problems. The specific objectives of MUST were concerned with identifying and attacking emerging problems that were susceptible to self-instructional, short-term resolution, and preparing materials that untrained leaders would be able to use with school staffs who were anticipating entering some form of team-teaching or differentiated staffing.

The program strategy employed the following form: The topic would be identified; relevant knowledge would be synthesized; materials would be generated as simulation games; and prototypes of materials would be field tested, evaluated, revised, retested, and prepared for dissemination. The expected outcomes for school personnel were: (1) Becoming more aware, (2) developing specific skills, and (3) facilitating the formation of intact work groups.

CASEA's project "Inform," the forerunner of MUST, was initiated in 1970 as an ongoing mechanism for developing and disseminating self-instructional materials that focused on single concepts or skills. The concepts or skills employed were synthesized from work completed at the center and from other sources to meet the express needs of school personnel. The Ernstspiel Kit on Communications was begun in fiscal year 1970. The new program title for project "Inform," fiscal year 1972, became Management Utilizing Staff Training (MUST) and the components were to be composed of Ernstspiel-type kits in leadership and planning during the first phase. Phase 2 would focus on two other components and phase 3 on an additional two. Components in each phase were expected to require 26 months for completion. Phase 2 work would overlap the work in progress in phase 1 by 9 months, and phase 3 would overlap phase 2 in the same manner. The end product of each component would be a set of interrelated, self-instructional packages focusing on a single concept, requiring an hour or less to complete and employing the pedagogy and format of the Ernstspiel Kit on Task-Group Development-Communication. The materials would be disseminated by commercial publishers after extensive field testing and modification. The materials were designed to be used by groups entering or anticipating entering cooperative planning and implementing activities in elementary schools, but in light of past experiences, the materials would be applicable to a wide variety of settings.

Status. On November 5, 1974, an institute decision was made to phase out the MUST program. At that time the Ernstspiel Kit had been completed in prototype form. A comprehensive evaluation plan had been developed and submitted for NIE approval. The Ariole Kit had been prepared and was ready for field testing before preparing the final prototype. The other four kits were in various stages of literature search and analysis and conceptualization.

In a letter from Max Abbott, director of the center, dated November 18, 1974, Dr. Abbott proposed that the NIE-budgeted $60,000 could be used to complete the Ariole Kit in prototype form.

The two prototypes along with the final report were submitted to NIE in June 1975.

Funding.

Fiscal year 1973	$336,429
Fiscal year 1975	*13,955
Total.	350,384

*$46,045 carried over from fiscal year 1973 funding, providing a total of $60,000 for phase-out activities.

Monitoring history.

Dates	Project officer	Activities
March 1973 - January 1974	George Carnett, local problem solving	1. December 1972, prefunding site visit, 2 NIE staff, 2 outside consultants. 2. December 1973, site visit, 2 NIE staff, 2 outside consultants.
January 1974- August 1974	Spencer Ward	1. No site visits, numerous telephone calls and exchanges of correspondence.
August 1974- July 1975	Robert Pruitt, finance and productivity	1. Site visits requested, none allowed. Project officer approved the final report.

CENTER FOR THE STUDY OF EVALUATION

Mission

The Center for the Study of Evaluation (CSE) is the only university-based, federally supported agency devoting its total scope of work to the exploration and refinement of strategies of evaluation. CSE was established by the U.S. Office of Education in 1966 and has maintained its commitment by furnishing the broad educational community with both products and research findings directly applicable to meeting the increasing requirements for evaluation of educational and social-action programs. CSE has illustrated its dedication by selecting projects that result in the transfer of technology to user sites. Lest the specter of top-down research and development be inferred from such an orientation, it should be made clear that CSE has developed its program from the dual perspective of potential user needs and strong scholarly orientation. Thus, the CSE mission is informed both by expressed needs of people in schools and by independent analysis of needs conducted by CSE scholars. Both sources are subjected to rigorous review and verification through empirical efforts.

In an effort to free school personnel from their roles as evaluation consultants, the center has developed a strong reputation for its preparation of resource materials for school use. Another focus at the center has been the exploration of alternatives to current achievement testing practices. In the area of criterion-referenced testing, issues of test bias, utility in reporting alternatives, and technical standards are a continuing part of CSE effort.

The center has developed expertise in the design, development, and dissemination of evaluation training products. It is expected that the existence of this expertise would enable the center to maintain its commitment to develop products for use in a broader educational context. Areas in which CSE plans to expand are briefly summarized in the paragraphs which follow.

As experience with evaluation in schools grows, CSE would anticipate providing school users with more choices among evaluation approaches. CSE plans to offer alternative ways to meet evaluation needs, and is experimenting with this intent in one of its products.

The major focus of CSE resource preparation efforts has been at the local school site, directed at principals or their designates. Evaluation is regarded as a linked process, in which information and judgments flow both to the policy level as well as to the managers of instruction where the demonstrable impact must be made. CSE plans to expand its concerns bilaterally to both policy formers and teachers.

CSE materials have been developed for a range of "model" sites. The modification of center products for more effective implementation in minority communities reflects a major CSE priority. In addition, the application of CSE models to postsecondary and nontraditional school contexts is desired.

The center plans to maintain its research impetus in the field of measurement, including continued refinement of conceptual and technical work in the field of criterion-referenced testing. Of interest will be the development of schemes to facilitate publishers' use of higher standards in the development of their own test materials. Included in this research is the development of a program directed toward test bias related to minorities and women.

The center wishes to explore the policy and instructional antecedents and consequences of using evaluation in schools. An early example of this interest is the currently funded bilingual prediction study, designed to provide information about the best timing for transferring children to English language instruction.

Through its workshop program, CSE has conducted training in evaluation procedures for school district and building managers. Some training has been directed toward classroom teachers. CSE would hope to develop and implement training in evaluation for policymakers--individuals who occupy board of education positions, aides to State and Federal legislators, and workers in State and Federal educational program and control agencies. Such training would consist of seminar series designed to assist policymakers in the formulation of evaluation questions and to provide them with firmer understanding of the strengths and limitations of present evaluation technology.

Because of its acknowledged expertise, CSE has been asked to conduct large-scale evaluations which have clear policy implications (for example, the evaluation of the Early

Childhood Education program in the State of California). The center plans to select and pursue an extremely limited number of such evaluation opportunities in order to continue to acquaint the staff with the range of problems confronted by evaluators in those situations.

Management

The center is a unit of the graduate school of education at the University of California, Los Angeles campus. The director is appointed by the dean of the graduate school of education. CSE is subject to all regulations applicable to university agencies, including personnel and fiscal procedures; the ultimate responsibility for policy formulation resides in the regents and for policy implementation by the president of the university and the chancellor of the Los Angeles campus.

As the chancellor's administrative agent, the dean of the UCLA Graduate School of Education is responsible for the operation of all units of the school. The educational policies committee of the school advises the dean and is empowered to review the center. In addition, a faculty advisory group, consisting of five faculty members, including a representative of the dean's office and the educational policies committee, meets to advise the director of the center on matters of policy. Such meetings are held quarterly but may be convened as necessary.

Center personnel who are either faculty members appointed to the university or members of the professional research staff are subject to review every 2 years by the advisory committee of the department of education, one of the units of the graduate school of education. Nonacademic personnel are reviewed in compliance with university policies. The community advisory board of the center consists of seven members, representing State and local educational agencies, professional organizations, and teachers. In addition, each program of the center has its own community-based external advisory group.

The present and continuing conceptual orientation of the center is the responsibility of the director. She is assisted in her responsibility by the associate director, by individuals within the graduate school of education, and by the professional staff of the center. The faculty advisory group meets to advise the director on policy. The community advisory board serves as a source of information and ideas concerning evaluation needs within the wider educational community. There is, additionally, a new activities screening committee composed of the associate director and rotating senior staff members who meet to act upon and allocate requests for services as they come into the center. This committee also makes recommendations to the director about responding to requests for proposals.

The director of the center has responsibility for the conduct of center activities as well as for relationships between CSE, the graduate school of education, the UCLA campus, and the larger professional community. The associate director has responsibility for the fulfillment of existing center contracts in a timely and well-executed manner.

The center's scope of work is organized into four program areas: The Equity Education program, the Evaluation Technologies program, the CSE Services program, and the Special Evaluation Studies program.

Within each program area there are usually several projects. Each project is headed by a project director who holds the title of senior research associate. In addition to the project director, there is usually at least one research associate level staff member assigned to each project. Large projects have their own secretarial staff; smaller projects use the services of a typing pool. All projects share data processing staff as needed.

Project directors have general responsibility for the day-to-day operation of their projects. Although senior and associate staff usually have primary responsibilities for a single project, they may work on several projects simultaneously. The center's organizational structure accommodates a scope of work which emphasizes cross-fertilization among projects.

In addition to flexible allocations of time by staff to related projects, coordination and communication between projects is facilitated by a system of internal peer review. On an informal basis, project directors consult with one another. More systematically, they provide reviews and critiques of one another's work on a planned basis. Coordination between projects is further aided by monthly meetings of senior staff.

As noted above, each project director has relative autonomy over the management of his project. There are, however, accepted centerwide procedures for the formulation, development, and evaluation of products. For example, it is common practice for each project to form an advisory group consisting of representatives of user population depending on the project need.

It is usual, at key points in the development of center products, for project directors to ask external reviewers to provide detailed critiques. It is also customary for components of center products to be tried out with small groups of center staff, graduate students from the school of education, or willing teachers and administrators from local schools. This pilot testing "debugs" small modules before they are combined into a workshop or a kit. Draft versions of completed products are then tried out locally for limited audiences. Finally, national field tests are conducted. Most projects have found it useful to conduct one or two case studies with intensive and continuing center involvement in order to supplement revision data gathered from surveys and questionnaires.

Staff

The center is organized around a core of professional and support staff who provide continuity and experience and whose talents are supplemented by visiting scholars and faculty affiliates who have additional expertise in education and related disciplines. Identification as part of the UCLA campus allows CSE to draw upon established scholars and highly motivated graduate students in a variety of fields to complete the CSE scope of work in an efficient and imaginative way. Thus, the staff of the center may have heavy representation of sociologists, anthropologists, law professors, philosophers, political scientists, management experts, or psychologists, depending upon project needs. One of the features of this arrangement is the continual renewal of staff. Further, CSE represents the only R. & D. institution devoted to evaluation practice in the entire University of California system. Thus, CSE draws for its staff not only members of the graduate school of education, but faculty and students from other departments and other campuses of this world-renowned, publicly funded institution.

The staff consists of 9 faculty, 11 senior professional staff, 27 research associate staff, and 18 support staff.

In addition, the center has 5 visiting fellows from UCLA and other universities who work at the center for specified periods of time and 27 faculty affiliates who work on center projects on an as-needed basis.

Of the nine faculty members directly involved in center activities, one serves as the center director, one is a coprincipal investigator, another is project director of a work unit, and the remaining six are key contributors to various work units. These faculty members bring skills in educational measurement and statistics, early childhood development, comprehensive curriculum, learning and instruction, research methods and evaluation, administrative studies, law, and philosophy.

Staff Development

Staff development at the center proceeds on both an informal and a formal basis.

Informally senior staff are encouraged to interact with one another in a manner that will continually expand their knowledge and skills. They identify colleagues to critique their project's work and provide peer review at all stages of formulation, implementation, and evaluation. Senior staff also work with faculty members associated with their projects as well as with visiting fellows and faculty affiliates to produce papers for professional and practitioner audiences.

Research associate staff in graduate training, upon their initial employment by the center, are placed in situations for which their previous experience and training qualifies them. Their work is supervised by the project director who attempts to broaden their perspective and competence. As they become able, they may take increasing responsibility for project management. Several associate staff have moved into senior positions at the center. Associate staff are encouraged to gain experience on other projects both to cross-fertilize the work itself and to further their own development.

Formal training is provided to incoming staff members in the form of CSE evaluation workshops. Evaluation workshops I is conducted at intervals for new staff as well as interested faculty. Components of other workshops are initially tried out with center staff. This activity quickly orients staff to problems in product development and in evaluation, and engages them in attempting to find solutions. Although attendance is not mandated at center colloquia and lectures, it is strongly recommended for associate and senior staff members.

Staff development opportunities are also made available through the auspices of the UCLA personnel department, which provides a variety of courses ranging from basic courses in English composition and clerical skills appropriate for clerical employees, to management, contracting, supervisory, and affirmative action courses appropriate for professional staff responsible for project management. All university employees receive reduced fees and, under certain circumstances, released time to attend job-relevant courses offered by UCLA and UC Extension. General university regulations also provide for released time for off-campus job-related courses.

Project directors have responsibility for allocating their limited travel and training resources in such a way that all staff members have the opportunity to attend professional conferences in their areas of interest. Where possible, center staff are encouraged to attend training workshops offered by other labs, centers, or institutions. All staff members are encouraged to attend or audit university or university extension courses at reduced rates.

Training Provided to Others

The twin training goals of the center are: (1) To develop educators' skills in the design and conduct of evaluations using the workshops, kits, and other materials growing out of the center's scope of work; and (2) to assist educators to use CSE materials so that they can, in turn, train their own staffs and associates. Those with whom the center has worked toward these goals are: Superintendents, principals, teachers, curriculum directors and developers, professors of education, project directors, evaluators, researchers, and representatives of research and development organizations. This audience includes representatives of the U.S. Office of Education regional staff, State and county departments of education, and district and building level administrators and teachers.

Evaluation training materials produced by the evaluation technologies program have been presented to or used for training with the membership of such organizations as the American Educational Research Association, the California Educational Research Association, Phi Delta Kappa, the Council of Educational Development and Research, the American Association of School Administrators, and the California Elementary School Administrators' Association. The center has also adapted these evaluation training materials for use with graduate students who are either specializing in or have an interest in educational evaluation. To date, this kind of training has been conducted with graduate students in UCLA's School of Education, UC Riverside Department of Education, the University of Wisconsin School of Education, and the University of Northern Colorado. These attempts at providing direct training to graduate students have proven to be successful and will be continued in the future.

Center consultation and technical assistance relating to the equity evaluation program has been provided at workshops and professional association meetings, such as the International Bilingual Conference, Chicago, 1976; the AERA Annual Conference, 1975; and the California Elementary Education Association Conference, 1975. The SOBER-Español evaluation system has also been presented at the California State Department of Education; San Diego, Calif., School District; Los Angeles County School District; and several agencies outside the State.

The SOBER system, the assessment/curriculum correlation index, and the prediction study were among the topics of a 1-week workshop which took place during June 1976 in South America, sponsored by UNESCO and OAS. This conference presented innovative curricula and assessment instruments to 80 reading specialists from 14 countries in Latin America.

In addition to the training provided by SOBER-Español to audiences with special interests, center training in the form of workshops has been provided to such other minority or special interest groups as the Alaskan Federation of Natives, and departments of special education.

The kinds of training provided by the center consist of orientation to the center model of evaluation, training in the discrete stages of the model, and training in special topics related to the conduct of an evaluation.

Listed below are the titles of the evaluation and special topics workshops offered.

- Evaluation Workshop I: Orientation.
- Evaluation Workshop II: Needs Assessment.
- Evaluation Workshop III: Program Planning.
- Evaluation Workshop IV: Implementation Evaluation.
- Evaluation Workshop V: Progress Evaluation.
- Evaluation Workshop VI: Outcome Evaluation.
- Refining and Selecting Instructional Objectives.
- Constructing Test Items to Measure Educational Objectives.
- Teacher Appraisal for Improvement.
- Individualization with Objectives-Based Assessment.

Each workshop is thoroughly analyzed for effectiveness of materials used, conceptual soundness and practicality of the training being provided, the feasibility of the training mode, and the ease of workshop delivery, as well as the overall cost effectiveness of the workshops.

These workshops have been presented to almost 10,000 participants at approximately 140 sites.

Institutional Relationships

Within the University of California, the institutional relationships of CSE are strong. The associate vice chancellor of undergraduate affairs serves as a faculty affiliate of the center. The director of CSE is an appointee to the instructional improvement board of the campus. The center has or is currently performing evaluation services for a number of university agencies, among them the medical center, the school of public health, UCLA Extension, and the student legislative council.

At the local educational level, one senior staff member is a member of the evaluation advisory group of the Los Angeles City School District, and another is a member of the decentralization subcommittee of the community-management review committee in the same school district. The center has also developed a special relationship with the Irvine Unified School District, which permits it to conduct research and evaluation of common interest to both institutions.

At the State educational level, the director has served as a member of the California Department of Education evaluation panel; one faculty affiliate, representing the regents of the University of California, serves as ex officio member of the commission on teacher preparation and licensing; while another affiliate is a member of the management and evaluation commission. Faculty affiliates and staff members have also served the office of the legislative analyst and have been members of citizens' advisory committees on measurement and evaluation issues.

Ties with professional organizations are particularly strong. The director has been extensively involved in AERA training activities, is currently a member at large of AERA, and a memebr of the AERA standing committee on research training. She is also a member of the California advisory committee of education research, and advisory group to the California teachers association.

Facilities

The center occupies office space within the graduate school of education building on the UCLA campus and at a building several blocks off campus. Equipment owned by CSE includes:

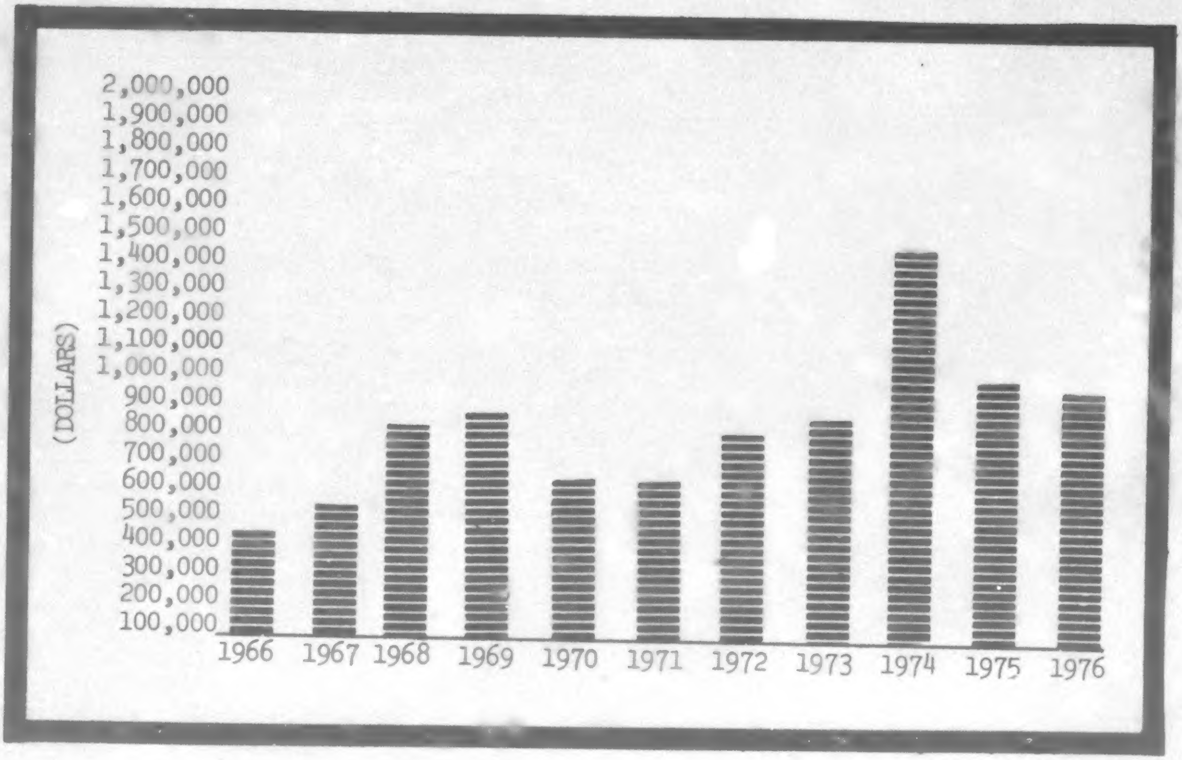
- A. B. Dick offset press.
- IBM keypunch machines and a card unifier.
- Card counter for data processing.
- Savin Word Master (cassette tape memory typewriter).
- Automatic collating machine.
- Manually operated binding machines.
- 3M master maker for producing masters for the offset press.
- Computer terminals located in the center and tied into the campus computing network.

Located within the graduate school of education building and available to center staff is an audiovisual laboratory with complete audiovisual equipment (overhead projectors, film equipment, reel-to-reel tape recorders, etc.). There is also a curriculum inquiry center with a catalog of texts and multimedia curricular materials.

On the UCLA campus, the media center is available for the production of cassette tapes used for instructional materials. Campus publication services can provide CSE with graphic design and professional layout. The UC printing and production office will do any elaborate printing which cannot be handled on the A. B. Dick offset press.

The UC library system is available for CSE use: the education/psychology library is immediately adjacent to CSE offices; likewise, the extensive UC research library and all specialty librarians are available to staff.

Figure 2. Funding history



CURRENT NIE PROJECTS

Project EVALUATION TECHNOLOGIES

Objectives and strategies. The aim of this program is to increase the number of trained people capable of conducting evaluations at the LEA and SEA levels, and to acquaint consumers of evaluations (parents, teachers, and policymakers) with the evaluation process. Strategies employed focused on the development, field testing, and dissemination of individual and group instructional materials. Materials include kits, guides, manuals to conduct evaluations and perform the functions of needs assessment, program planning, and formative and summative evaluation. Included for training evaluation are books matching educational objectives with current standardized tests.

Unique features of the program include a current emphasis on research through its research program on criterion-referenced measurement and the close involvement of theoreticians with product developers for congruency of theory and practice through its visiting-fellows program. The development model or strategy involves research, development, field testing, and dissemination. Two features are particularly noteworthy: (1) An iterative process of interaction between developers and methodologists that shapes successive approximations of the final product along with data from field testing; and (2) modular field testing of both whole products and components at local, State, regional, and quasi-national levels.

Status. The following grid summarizes the components, developmental stage/status, and schedule for completion.

Project components	Status/stage	Completion schedule
Evaluation kit series	Conceptualized, outlined in draft form, field testing.	Nov. 30, 1976-77

Project components	Status/stage	Completion schedule
CSE (Criterion-Referenced) Test Evaluation Book	Conceptualized: Criterion-Referenced Test Book.	Nov. 30, 1976
	Completed and distributed:	
	Elementary Test Evaluation Book.	NA
	Kindergarten Test Evaluation Book.	NA
	Secondary Test Evaluation Book.	
Evaluation Workshops:		
Program Planning Workshop	Conceptualized, outlined.	Aug. 31, 1976
Outcome Evaluation Workshop	Draft components.	Nov. 30, 1976
Simulated Settings in Evaluation	Review of literature, design stage.	Nov. 30, 1976
Research on Criterion-Referenced Measurement	1 monograph completed, current theoretical inquiry on 3 reports, AERA Symposium presented in April 1976.	Nov. 30, 1976
Issues in Measurement and Methodology	Planning, issue delineation stage.	Nov. 30, 1976
Visiting Fellows Program	Search completed, candidates identified, preselection process.	Nov. 30, 1976

Funding.

Fiscal year 1973	394,500	(*46%)
Fiscal year 1974	694,866	(*48%)
Fiscal year 1975	579,982	(*56%)
Fiscal year 1976	536,000	(*55%)
Total	2,205,348	

*Percent of CSE total.

Accomplishments. The educational impact of these projects is suggested by the use of the CSE products in every State of the Union and in approximately 22 foreign countries. Over 2,000 principals are using the elementary evaluation kit, over 3,000 have undergone evaluation workshops and are now capable of conducting training sessions, and over 19,000 test-evaluation books are being used by school personnel to select objectives and testing materials. In addition, over 2,000 evaluation and 9,700 test comments on evaluation are being disseminated to all types of researchers, practitioners, and libraries, a spinoff of the center's activities at no cost to the institute.

Monitoring history.

Dates	Project officer	Activity
1972-73	Chester Neudling	General monitoring.
1973 to present	Daniel P. Antonoplos	General monitoring. March 1973, site visit by Antonoplos. February 1974, site review by Polmantier and Antonoplos. September 1975, site review by Polmantier and Antonoplos. November 1975, site review by Antonoplos, Hereford, Faust, and Whinnery.

Project SOBER-ESPAÑOL

Objectives and strategies. The SOBER-Español project is developing criterion-referenced tests to assess competency in reading Spanish for grades K-6. The SOBER-Español test system is based on measurement of specific student behaviors thus enabling teachers to judge how their students perform with respect to specifically described reading skills in Spanish. The teacher determines what specific reading behaviors will be tested by selecting from a list of objectives those which measure behaviors appropriate to the skills that students are to have mastered. Prepared test items are then selected that correspond to the objectives the teachers have chosen, creating a "tailormade" test.

Status. SOBER-Español was initiated in fiscal year 1974 as a work unit of the UCLA SCE PROBE program. In fiscal year 1975 the SOBER component became a separate project. At present the project has completed the development of test objectives and items for grades K-6. Tests for K-3 are being published by Science Research Associates. Test items for 4-6 are being field tested. The current project is scheduled for completion at the end of fiscal year 1977.

Funding.

Fiscal year 1975	$104,000	(*10%)
Fiscal year 1976	150,000	(*15%)
Total.	254,000	

*Percent of CSE funding.

Accomplishments. The project accomplishments to date are reflected in the following products under publication by Science Research Associates:

- A Guide to the Selection of Objectives.
- Catalog of Objectives for Grades K-3.
- 206 K-3 Objectives with three items each (in press).
- Examiner's manual (in press).
- User's guide (in press).

Monitoring history.

Dates	Project officer	Activity
October 1973-November 1975	Daniel P. Antonoplos	General monitoring.
November 1975 to present	Susan Stairs	General monitoring. October 1975, 2-day review at NIE with project director, NIE staff, and 3 external reviewers (Ernest Bernal, Maria Medina Swans, and Jose Cardenas).

Project PREDICTION OF READING IN ENGLISH FOR BILINGUAL STUDENTS

Objectives and strategies. The prediction of reading in English for bilingual students study aims at providing information on the effectiveness with which reading ability in Spanish and English oral proficiency predict reading ability in English for bilingual children in grade 3. The objective of this predictive model will be to assist bilingual program personnel determine when a child is ready to make the transition from instruction in his/her native language to instruction in English.

Status. The prediction study was initiated in fiscal year 1976 and is scheduled for completion at the end of fiscal year 1977.

Funding.

Fiscal year 1976 . . . . $50,000 (*57%)

* Percent of CSE funding.

Accomplishments. There are no accomplishments as yet. The project is using SOBER-Español tests (for assessing reading in Spanish) and Teaching and Linguistic Pluralism project bilingual balance tests (for assessing English oral proficiency) in the development of a prediction model.

Monitoring history.

Dates	Project officer	Activity
December 1975	Susan Stairs, educational equity group, multicultural/bilingual division	No site visit or other major activities to date.

Project COOPERATIVE DISSEMINATION AND LINKING AGENT TRAINING

Objectives and strategies. This is one part of a project representing the cooperative effort of eight laboratories/centers (L/C's). Goals of the project are: (1) To provide more effective dissemination of materials and knowledge developed by L/C's in the area of educational planning, management, and change support; and (2) to make available coordinated materials and training resources to linking agents. Strategies to be used are: (1) Collecting, describing, and integrating the set of resources in a form which permits selection of useful materials; (2) orienting, training, and building a support system around the set of resources; and (3) preparing, responding to, and revising technical/conceptual papers to inform work in goals (1) and (2) above.

Status. This project began in fiscal year 1976 and is expected to continue in fiscal years 1977 and 1978.

The Evaluation Technologies program at CSE has developed training materials and workshops as well as management-support tools to help administrators with needs assessment and program planning. These materials are an important resource for linking agents who are helping school administrators improve programs. It appears important in this cooperative project to integrate L/C resources to help linking agents that staff from the center, chiefly from the Evaluation Technologies program, become involved.

Funding. There are no funds specifically allocated for their involvement in this project. The staff will participate in planning and orientation conferences where that is consistent with center plans and with their commitments to the basic-skills group.

Accomplishments. This dissemination activity has just begun. The project expects to have five or six L/C staff ("resource specialists") who can provide an orientation to the entire set of materials by June 1976. Each of those five or six L/C will collect a total set of materials. The project will provide eight orientations in 1976. CSE will perform a "resource specialist" function.

Monitoring history.

Dates	Project officer	Activity
Dec. 16, 1975		First meeting of representatives of 8 L/C's, NIE monitor, and NIE staff.
Mar. 1-5, 1976		Overview and planning meeting at FWL with representatives of L/C's, 2 consultants, and NIE monitor.
December 1975 to present	Spencer Ward	General monitoring.

COMPLETED OR TERMINATED NIE PROJECTS

Project PROGRAM FOR RESEARCH ON OBJECTIVES-BASED EVALUATION (PROBE)

Objectives and strategies. The program's activities concentrate on developing and field testing a system for objectives-based evaluation in reading. "Objectives-based Evaluation" is the testing of achievement toward a specific goal, to which learning activities have been directed. Examples of such goals, or objectives, are learning the names of letters; learning the sounds of letters; and learning the principle of addition. The rationale for developing this system lies in the assumption that objectives-based activities assure more learning than non-objective-based activities, and that objectives with corresponding tests developed by evaluation specialists will have greater validity than some of those developed by teachers, will save teacher and learner time, and will facilitate programs in which each learner progresses at his own rate.

The center developed a comprehensive bank of objectives for reading.in English with corresponding tests for grades K-12. From this bank schools may select for purchase the objectives and tests suitable for their own reading programs. In addition,this project has conducted and supported initial work on criterion-referenced measurement.

Status. The PROBE project has been completed. Two modifications are of special note:

- Research on criterion-referenced measurement has been continued under the Evaluation Technologies program.
- The SOBER-Español component, which is developing a Spanish system parallel to SOBAR, is being continued by the Educational Equity program.

Funding.

Fiscal year 1973	$207,500	(*24%)
Fiscal year 1974	313,519	(*22%)
Fiscal year 1975** . . .	183,765	(*18%)
Total	704,424	

*Percent of CSE total.
**Excluding SOBER-Español.

Accomplishments. (1) The objectives and evaluation materials have been field tested by 50,000 children in Florida, 500 in Colorado, and 700 in California. A contract for commercial publication of the program products was negotiated with Science Research Associates. (2) System development (the reference is to a system for evaluating achievement in reading). Products: Tests for measuring achievement in reading, grades K-12. (3) System for objectives-based evaluation for Spanish-speaking children (SOBER-Español). Products: Reading objectives, grades K-3. Tests for these objectives, grades K-3.

Monitoring history.

Dates	Project officer	Activity
1972	Susan Brett	General monitoring.
1973	Kent Viehoever	General monitoring.
1974-75	Daniel P. Antonoplos	General monitoring.
September 1975		Site evaluation by Andrew Porter and Antonoplos.

CURRENT NON-NIE PROJECTS

Project EVALUATION FIELD SERVICES (NATIONAL)

The primary function of CSE field services is to provide implementation of CSE training materials developed by other CSE projects. This consists of conducting workshops and offering presentations to agencies adopting CSE materials. Additionally, other forms of technical assistance are provided to agencies with specific problems and needs. This project is self-supporting.

Project EVALUATION SERVICES AND TRAINING UNIT/UCLA

The evaluation services and training unit was established to provide evaluation and related training to diverse UCLA projects and agencies. Assistance is available in designing and conducting evaluations, in developing training materials, and in organizing and conducting exportable training sessions (or workshops) in the theory and practice of evaluation. In addition, statistical compilation and research design are within the project's realm of expertise. A direct line with the campus computer network (CCN) at UCLA provides CSE and its units with the latest in computer programing capabilities and facilities. This project is funded by various UCLA agencies. Major projects currently include:

EDUCATIONAL OPPORTUNITY CENTER (UCLA EXTENSION)

This service contract included the development of a computerized program management and evaluation system; implementation and monitoring of the system; training EOC staff, conducting evaluation surveys; writing quarterly reports with EOC for their USOE sponsors. CSE has designed the system, conducted two interview surveys, and designed EOC's client tracking and followup file system and forms.

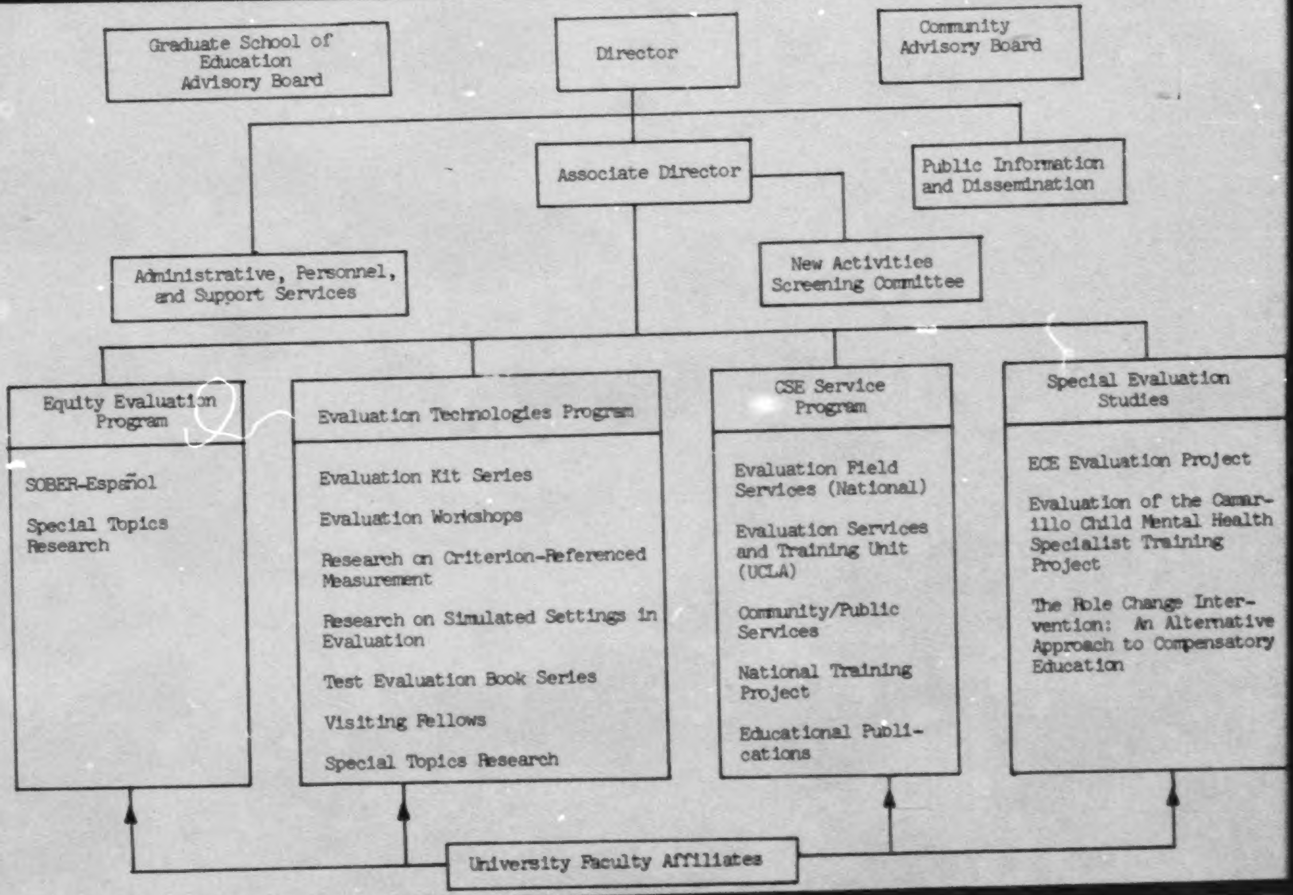
EXPERIMENTAL MEDICAL CARE REVIEW ORGANIZATION (EMCRO)

This project included the design of surveys and research studies, validation of the EMCRO system, development of computerized quality-of-medical-care evaluation system, and development of staff-training workshops and guides. CSE designed and conducted several studies, developed a preliminary version of the computerized system, and completed a medical abstractor's workshop.

Project EARLY CHILDHOOD EDUCATION (ECE) EVALUATION

CSE has been asked by the California State Department of Education, with the cooperation of the office of the legislative analyst and the department of finance, to evaluate the effectiveness of the early childhood education (ECE) program in California. The sample of schools for the evaluation study will enable CSE to examine schools which receive ECE funding and those which do not receive such funding in order to compare their relative success in such areas as student achievement in reading and mathematics and attitude toward learning. Schools receiving different combinations of supplemental funding from a variety of sources will also be analyzed. The design also permits substudies which relate program implementation variables to desired outcomes. This project is funded by the California State Department of Education.

Figure 1. Organizational structure


Graduate School of Education Advisory Board
Director
Community Advisory Board
Associate Director
Public Information and Dissemination
Administrative, Personnel, and Support Services
New Activities Screening Committee
Equity Evaluation Program
SOBER-Español
Special Topics Research
Evaluation Technologies Program
Evaluation Kit Series
Evaluation Workshops
Research on Criterion-Referenced Measurement
Research on Simulated Settings in Evaluation
Test Evaluation Book Series
Visiting Fellows
Special Topics Research
CSE Service Program
Evaluation Field Services (National)
Evaluation Services and Training Unit (UCLA)
Community/Public Services
National Training Project
Educational Publications
Special Evaluation Studies
ECE Evaluation Project
Evaluation of the Camarillo Child Mental Health Specialist Training Project
The Role Change Intervention: An Alternative Approach to Compensatory Education
University Faculty Affiliates

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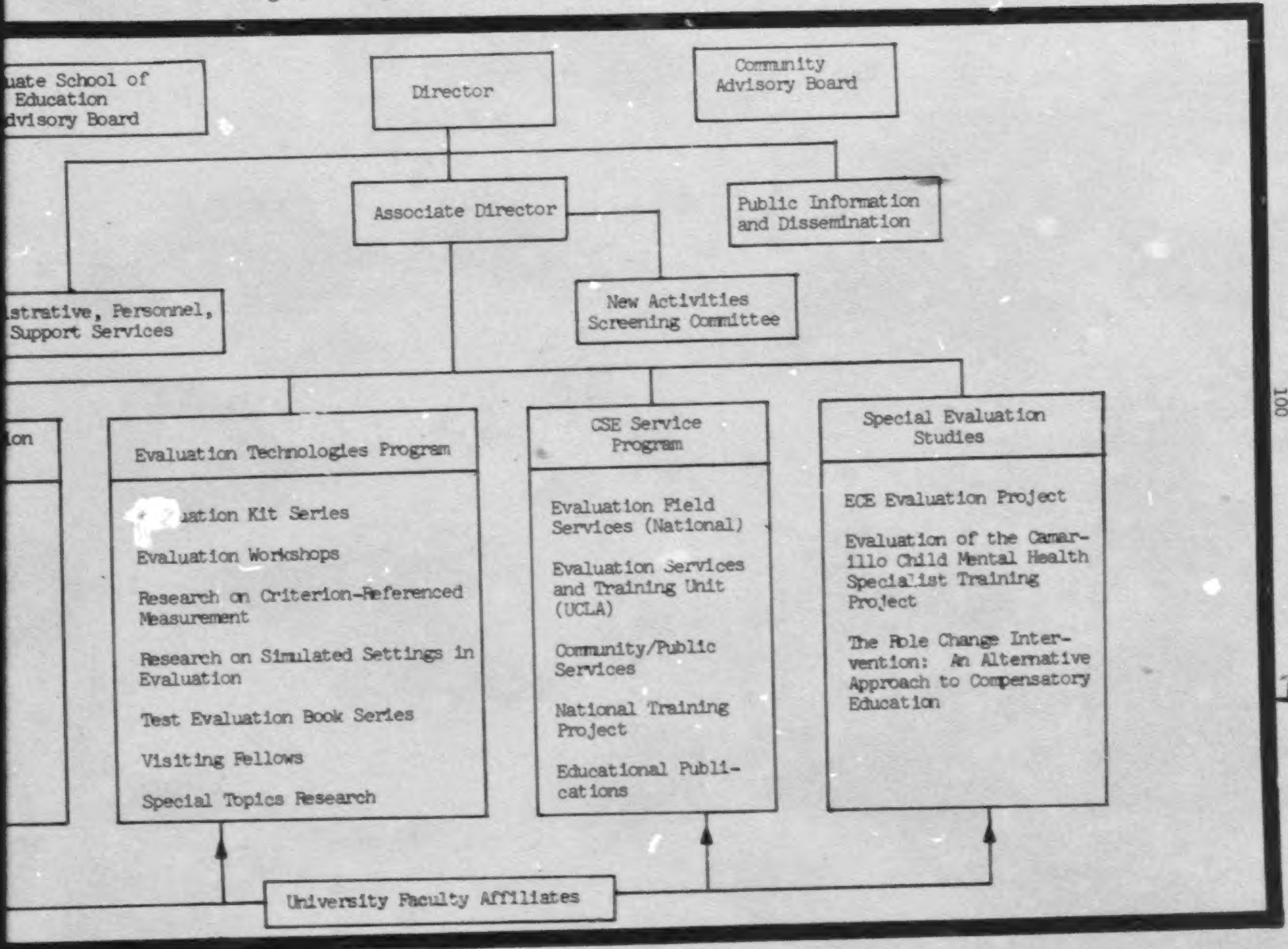
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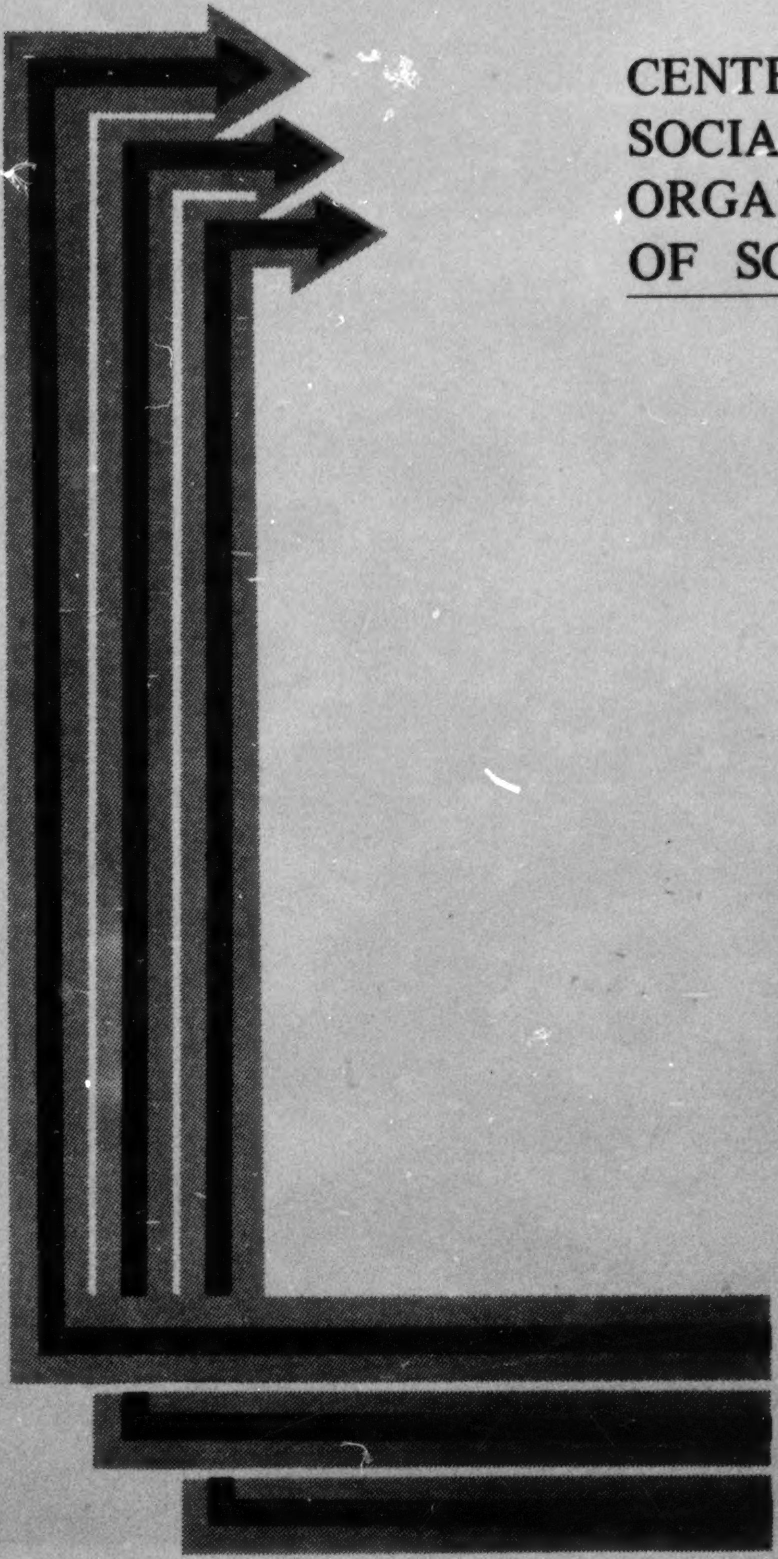

CENTER FOR SOCIAL ORGANIZATION OF SCHOOLS

James McPartland, Codirector
Edward McDill, Codirector

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Baltimore, Maryland 21218

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CENTER FOR SOCIAL ORGANIZATION OF SCHOOLS

Mission

The goal of The Johns Hopkins University R. & D. Center is to produce useful knowledge on how organizational and social changes in schools can influence a broad range of important student outcomes. This center specializes in basic research on new structural forms and organizational improvements for schools, classrooms, and school systems.

The general aspects of schools studied include reward, task, and authority systems, as well as demographic variables that determine the access, differentiation, and size of school memberships. Also, properties of school systems are examined with regard to opportunities for part-time, interrupted, later-life, or informal education. Practical examples of school organization research conducted at this center include studies of open schools, group reinforcements for students, school desegregation, tracking, individualized tasks, participation in decisionmaking, school size, absenteeism, violence, and vandalism.

The student outcomes studied include both immediate student skills and attitudes as well as long-range consequences for occupational and adult roles. The immediate outcomes include academic achievement in basic skills and nonacademic talents such as creativity, self-reliance, leadership, realism, and psychosocial maturity. Students' immediate reactions to school life have also been investigated in several dimensions. The later-life outcomes in center studies include occupational status, income, and attitudes as well as adult characteristics of tolerance and noncriminality.

The center maintains three continuing programs that focus on different elements of the question of how structural changes in schools affect important student outcomes.

The School Organization program concentrates on the direct effects of changes at the school level on present skills and talents of students. This program contributes to (1) the statistical methodology for making accurate estimates of school productivity; (2) the conceptualization and measurement of differences in school structures and environments; and (3) a substantive understanding of the interplay between the formal organization of schools, informal social influence processes, and a broad range of student outcomes. This program received support in fiscal year 1976 from the NIE finance and productivity group.

The Career Development and School Processes program concentrates on the links between education, family and occupational achievements. This program contributes to (1) technical issues in empirically specifying and estimating the basic status attainment model and (2) substantive elaborations of the dimensions of schooling experiences and occupational attachments in studying the connections between education and work. Published center work that is well known by researchers in the field includes: Systems for using life history data in career research, sex and race differences in the status attainment process, adjustments for estimation biases in determining the occupational return from additional schooling, and effects of school program differences and of alternative routes to educational credentials on career aspirations and achievements. This program received support in fiscal year 1976 from the NIE education and work group.

The Diversity of Human Talents program concentrates on defining and measuring the nonacademic talents that are needed for adult roles and that can be fostered in schools. This program provides an important connection between the other two programs by helping to identify the range of outcomes to be investigated for immediate school organizational effects, in light of knowledge gained on the kinds of skills needed for occupational or adult roles that go beyond usual measures of educational credentials or standardized academic achievement. This program is presently completing work on the concept and empirical measurement of psychosocial maturity. Future work will involve direct studies of nonacademic talents for actual occupational roles and instrumentation based on self-reports of accomplishments and competencies rather than personality scales. This program received support in fiscal year 1976 from the NIE basic skills group.

The emphases and experiences at the Johns Hopkins Center are different from those of many other research and development locations in several ways. This center concentrates on basic research and emphasizes sociological or social-psychological theories and methodologies in its work. The principal staff members are sociologists and social psychologists who contribute regularly to the major journals and professional research meetings in these fields, and who have wide experience in conducting surveys and analyzing non-experimental data. This center's research focuses on school structural variables that are more readily open to purposeful change and policy implications than variables that are restricted to individual attributes or social processes, where direct manipulation is more difficult.

The center regularly addresses the measurement and methodological issues in estimating school productivity with respect to immediate and long-range effects on students. The "state of the art" in conducting school-effects studies, while still in its early stages, is developing rapidly. The center staff, through its statistical expertise and involvement with rich and current data sources, is contributing to this development and works to be knowledgeable about current technical advances.

This center maintains a resource of social-science survey data on school-effects issues by conducting original field studies (such as the life-history survey, the survey of school climates, and the open-school survey), and by regularly using data sets assembled by others (such as the Coleman equality of educational opportunity survey, the national longitudinal surveys of NCES and DOL, the national census public files, the Eckland-Alexander educational opportunities survey, State assessment-data files, and selected surveys from other national research institutes).

The center has been able to conduct its programs at a comparatively low cost and high level of efficiency. Although the total research production of the Johns Hopkins Center is comparable in volume and impact to other well-known national research and development operations, it has operated on one of the smallest budgets over the years of any self-contained R. & D. institute.

To maintain and enhance its contributions to useful knowledge, the Johns Hopkins Center seeks to continue in each of its three programmatic efforts, while working within each area on specific questions that are important in the annual planning of NIE and other national agencies.

The center's direction for the future is to make use of the specific research expertise and knowledge achieved at the center by working on important next steps needed (1) to advance technical capacities to estimate school productivity functions in general; (2) study existing school variations that may have significant impact on classroom social process and on student talents or attitudes; (3) specify empirically how detailed dimensions of educational systems affect the career attainment process; (4) gain knowledge of the diversity of human talents needed and rewarded by society, which schools can help develop; (5) develop particular new organizational forms for classrooms that provide a more motivating environment for learning; (6) examine the school's direct role in affecting important social problems, such as racial tolerance and criminality; and (7) bring empirical evidence to bear on theory development concerning the school socialization process.

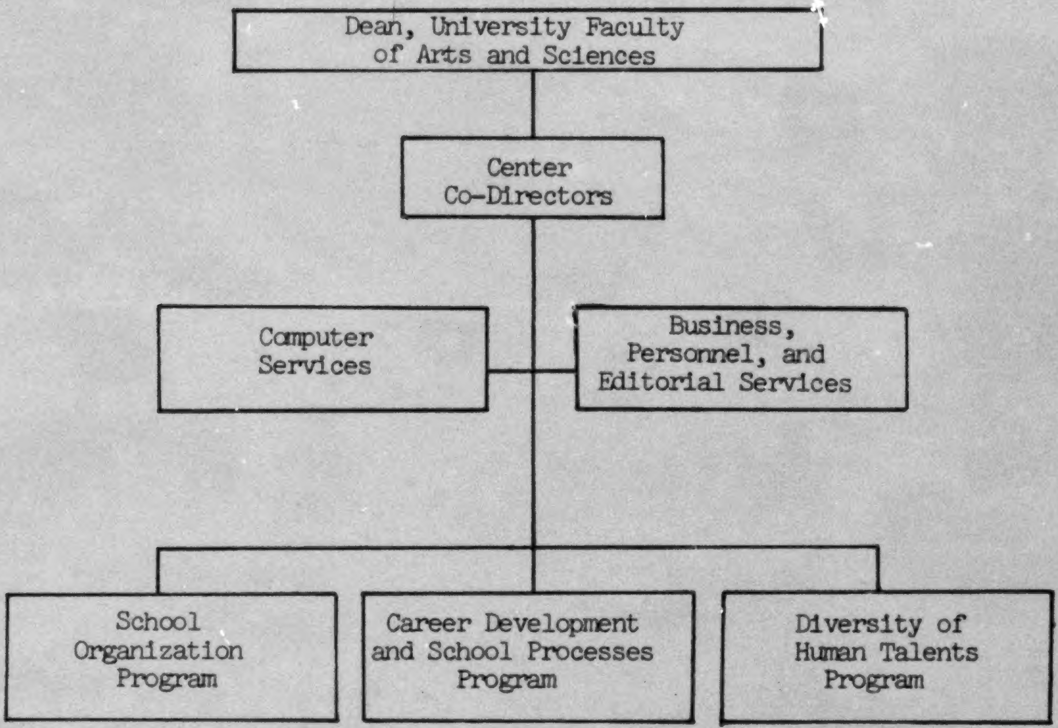
Governance

The Center for Social Organization is a research component of the Johns Hopkins University. The codirectors of the center report to the dean of the faculty of arts and sciences. Within funding restrictions, boards of consultants are invited to site-visit major center projects at critical stages in their progress, with agency monitors, program staff, and center codirectors in attendance. Some continuity of membership has been sought and achieved for those boards of consultants that have reviewed center activities over the years.

Management

The research studies of the center are conducted under three programs, each with its own directors and professional supporting staff. The three programs are complementary in that all focus on the effects of schools on students. Program directors cooperate extensively in program planning. One meeting each week is held with all principal research staff for program planning purposes. Product evaluation is a separate function of each program, with active consultation among all center staff.

Figure 1. Organizational structure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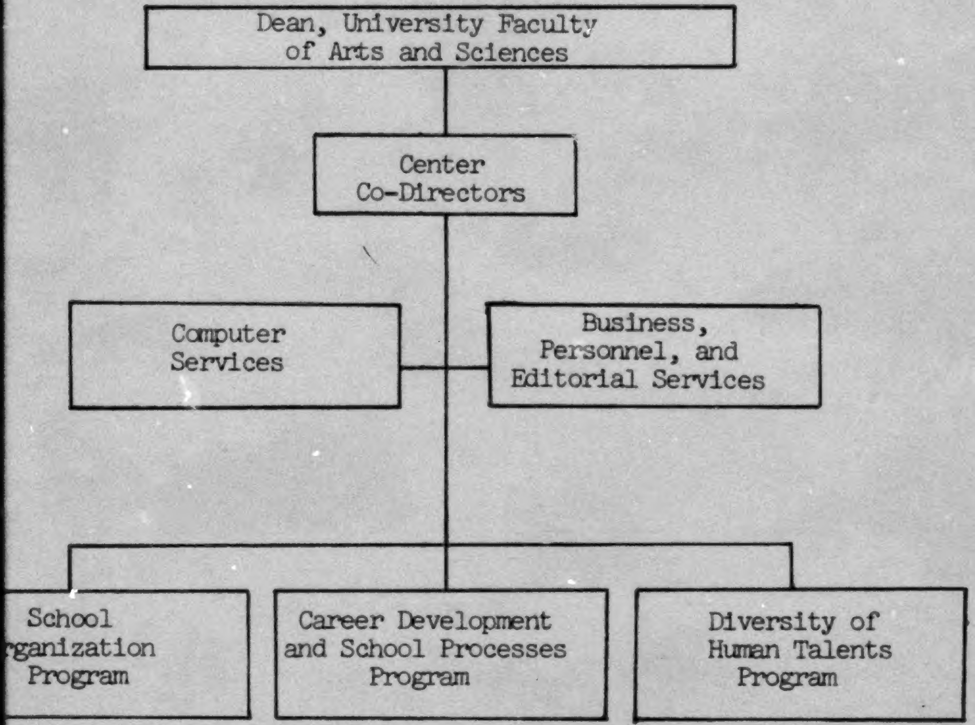
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Staff

Since 1966, the center has maintained an interdisciplinary staff of approximately 15 professional senior researchers and a smaller number of support personnel. The professional research staff includes educational sociologists; educational, social, and clinical psychologists; and measurement and computer specialists, all experienced in studying educational environments. In addition, other faculty members in various disciplines at Hopkins are available for consultation and participation in center research projects.

All members of the professional research staff complete several center research reports each year, and present the results of center studies through the major reference journals and annual meetings of the American Sociological Association, American Psychological Association, American Educational Research Association, and National Council on Measurement in Education. Approximately 215 center research reports and monographs have been published in the *Center Report* series in the past nine years. During the current year, papers reporting results of center research have appeared in or been accepted for publication by the following professional journals: *American Sociological Review*, *American Journal of Sociology*, *Sociology of Education*, *American Educational Research Journal*, *Review of Educational Research*, *Educational Researcher*, *Journal of Educational Psychology*, *Journal of Applied Psychology*, *Journal of Counseling Psychology*, *Journal of Criminal Justice*, *Journal of Vocational Behavior*, and *Measurement and Evaluation in Guidance*. Also, during the current year, center researchers have edited a monograph on school violence and contributed to the new *Handbook of Industrial and Organizational Psychology* (Rand McNally, 1976).

Three experienced full-time computer specialists and research assistants are employed to aid in the statistical work that is involved in most center projects. Graduate students from the departments of social relations and psychology are also extensively involved in center research, without pay, as part of their Ph. D. training. At various stages of projects, especially during data collection and processing, part-time staff are hired and trained for specific tasks.

The budgetary, legal, and personnel services are partially supplied by the university office of sponsored research administration, and are supplemented by part-time accountant and business-management professionals at regular intervals.

All center reports are edited and prepared for publication by professional editorial services from center personnel. A center administrative assistant supervises the extensive mail request services for center information and reports.

Staff Development

Scheduled seminars held at the center and seminars conducted through the university social relations and psychology departments are attended regularly by the center's principal research staff. Center staff members offer occasional graduate courses that focus on center research activities. Members of the center support staff regularly take advanced courses at the university in statistical methods and psychometric techniques at no cost to the center. Center research is presented each year by the principal research staff as part of the program of the annual meetings of the American Sociological Association, American Educational Research Association, and American Statistical Association, with discussion and critiques from other members of the professions.

Training Provided to Others

Many of the young researchers whose early career was located at this center have assumed responsible positions in other research organizations, universities, and state education department research. These include the director of research of the Center for Creative Learning, director of evaluation at NWRL, assistant director of Wisconsin's Poverty Center, NYS education department principal researcher, principal investigators at ETS, RAND, NORC and the Russell Sage Foundation, and research positions at the U.S. Office of Education.

Direct training is provided to university graduate students who regularly join center projects without pay and complete subprojects under the supervision of principal center staff members.

The center also provides workshop training for teachers and administrators in the use of the teams-games-tournament instructional process.

Center staff members provide regular free research advisory services to the Maryland State Department of Education, and work on cooperative projects with the research staffs of a significant number of local school districts, and with State associations of local school district research directors. Center staff members also serve on national advisory panels for major research activities.

Institutional Relationships

In the course of its 10 years of existence, the center has formed close informal ties with many public school systems and has developed an especially effective working relationship with the Maryland school systems, in which center staff serve as formal and informal consultants. Because the Maryland school systems are quite diverse in size and student population characteristics, a wide variety of school settings is available to center personnel for research purposes. Center personnel are currently working closely with school districts in Howard County, Frederick County, Prince Georges County, Montgomery County, Baltimore County, and in Baltimore City. This close relationship with local schools has enabled center personnel to conduct rigorous field experiments, as well as large surveys of heterogeneous school populations. The center has also had recent working relationships with school systems in Florida, Pennsylvania, Michigan, New York, North Carolina, South Carolina, Texas, and Virginia.

The developmental process is field oriented, based on experimental use in ongoing schools and classrooms, with administration and teacher input at all stages. This center-practitioner cooperation has resulted in useful products now being disseminated nationally, including—

- Extensive units to teach basic skills using the group-incentive techniques in classrooms [this product has been approved by the NIE/OE Joint Dissemination Review Panel, is presently being advertised by a commercial firm to over 1 million teachers and curriculum supervisors and is being disseminated through the State facilitator projects of the National Diffusion Network (NDN)];

- Instruments to measure psychosocial maturity and the quality of school life are under negotiation with commercial firms for national dissemination (these instruments are currently being used in a federally sponsored national survey of compensatory education and in State assessment programs);

- A computerized system to monitor student attendance in a single school is being modified by school personnel for expansion in a large urban system;

- A system developed at the center for the storage and retrieval of extensive life-history data is being adopted in several other research locations;

- Center research on school violence, career attainment, and school desegregation is being incorporated in general-knowledge volumes being edited by scholars outside the center (these volumes will be widely available).

The center maintains a dissemination system for bringing its work to the attention of researchers working in similar areas and to educators and administrators with interests in center problem areas. Center reports are produced and distributed to a select list of researchers and educators on an approximate biweekly schedule. Many center studies are reported in commercial research report services, newsletters, magazines, and publications available to educators. This exposure frequently results in several hundred requests for further information, which the center provides directly or through referrals to the ERIC system. In addition, the majority of center studies are published in scientific journals, or reported at meetings of scientific societies, to provide other researchers regular access to our findings. Also, a center member authors a regular column to summarize research, including center studies, in the NEA Journal which has a circulation of nearly 2 million educators.

Table 1. Funding history

Fiscal year	Dates	Amounts
OE grants		
1967	Sept. 1, 1966-Aug. 31, 1967	$172,717
1968	Sept. 1, 1967-Aug. 31, 1968	515,618
1969	Sept. 1, 1968-Jan. 31, 1969	226,000
1969	Feb. 1, 1969-Jan. 31, 1970	613,885
1969	Apr. 1, 1969-Sept. 30, 1970	46,186
1970	Feb. 1, 1970-Jan. 31, 1971	650,361
1971	Feb. 1, 1971-Nov. 30, 1971	521,402
1971	June 30, 1971-Add on	20,000
1972	Dec. 1, 1971-Nov. 30, 1972	650,000
1973	Dec. 1, 1972-Feb. 28, 1973	243,115
Subtotal		3,659,294
OEO contracts		
1970	July 1, 1969-Mar. 31, 1970	27,980
NIE contracts		
1973	Mar. 1, 1973-Nov. 30, 1973	480,473
1974	Dec. 1, 1973-Nov. 30, 1974	534,411
1975	Dec. 1, 1974-Nov. 30, 1975	501,549
1976	Dec. 1, 1975-Nov. 30, 1976	367,500
Subtotal		1,883,933
Total, all sources, 1966-76		5,571,207

Facilities The center is housed in a separate three-story building on the university campus. The facilities include a research library and an IBM 1401 with auxiliary equipment for exclusive use of center personnel. Center staff members assist researchers with programing services and consultation regarding computer operations and usage.

Center personnel have direct access to the facilities of the Johns Hopkins University, including the libraries and DEC-10 computer system with time-sharing equipment located at the center.

Members of the university faculty in social relations, psychology, and statistics not currently on the staff of the center are consulted regularly on center projects.

CURRENT NIE PROJECTS

Project SCHOOL ORGANIZATION PROGRAM - TASK STRUCTURE

Objectives and strategies. This project seeks to understand how to influence and increase student motivation for classroom achievement by modifying the nature of the tasks students engage in and by modifying the rules for the distribution of rewards in the classroom. Through a series of classroom experiences conducted over the past 3 years, the project has successively and successfully modified the nature of instructional tasks (by providing instructional games) and the degree of student cooperation needed to compete successfully in the games.

Status. This project is formally scheduled for completion in November 1976. It is possible the activity may be funded beyond this date.

Funding.

Fiscal year 1973	$65,214	(*14%)
Fiscal year 1974	97,507	(*18%)
Fiscal year 1975	115,649	(*24%)
Fiscal year 1976	54,000	(*15%)
Total	332,370	

*Percent of institutional funding.

Accomplishments. The results of these experiments have been twofold. First, they have produced new structures in classrooms on student motivation, student achievement, classroom environment, and on the frequency and nature of student interactions across racial and sex boundaries. Secondly, the research to date has produced a product for use in classrooms called Teams-Games-Tournaments (TGT) which has been proven effective in improving student achievement and the incidence of student cooperation in classrooms (peer tutoring) by modifying the task and reward structures in classrooms. This product has recently been approved by the OE-NIE Joint Dissemination Review Panel, is presently being advertised by a commercial firm to over 1 million teachers and curriculum supervisors, and is being disseminated through the State facilitator projects of the National Diffusion Network (NDN).

Project SCHOOL ORGANIZATION PROGRAM - AUTHORITY-CONTROL STRUCTURES

Objectives and strategies. This project is focused primarily on the effects of alternative authority structures ("open" vs. "closed" schools) on student academic achievement as well as the development of some nonacademic skills, such as self-reliance and realism. Additionally, it has addressed issues related to the interaction effects of family and school authority structures, and of variability of authority structure within schools. This research has been conducted via a survey of students in 35 elementary, junior high, and high schools in Howard County, Md.

Status. This project is formally scheduled for completion in November 1976. It is possible the activity may be funded beyond this date.

Funding.

Fiscal year 1973	$77,807	(*16%)
Fiscal year 1974	108,224	(*20%)
Fiscal year 1975	117,103	(*24%)
Fiscal year 1976	115,000	(*31%)
Total.	418,134	

*Percent of institutional funding

Accomplishments. Analysis of these data is currently under way though the work of this project has already resulted in the development of instrumentation to measure school authority structure and several nonacademic outcomes of schooling, including self-reliance and quality of school life. It is expected that a major research monograph on the effects of open schooling on students will be completed within the current contract year.

Project SCHOOL ORGANIZATION PROGRAM - PEER GROUP PROCESSES

Objectives and strategies. This project seeks to understand the processes and mechanisms through which student groupings (e.g., friendship groups, school student body) influence the educational, academic, and school-related attitudes of achievement of their members. It has sought to describe and examine the effects of variations in the normative orientations of faculty and student groupings at the school level and of more proximate student friendship groupings within schools.

Status. This project is formally scheduled for completion in November 1976. It is possible the activity may be funded beyond this date.

Funding.

Fiscal year 1973	$14,167	(*3%)
Fiscal year 1974	45,732	(*9%)
Fiscal year 1975	39,811	(*8%)
Fiscal year 1976	20,000	(*5%)
Total.	119,710	

*Percent of institutional funding.

Accomplishments. Much of this work has been summarized and reported in a monograph by McDill and Rigsby, *Structure and Process in Secondary Schools: The Academic Impact of Educational Climates* (Baltimore: Johns Hopkins Press, 1974). Work planned and currently under way in this area entails devising new measures of the internal structure of peer groups that can be used to identify types of peer groups with different effects, and attempting to conceptually and empirically separate the bases of peer group formation from the bases of group influence on its members.

Project SCHOOL ORGANIZATION PROGRAM - REWARD STRUCTURES (ATTENDANCE MONITORING/EXPOSURE TO SCHOOL)

Objectives and strategies. This project deals with multiple issues related to student attendance in schools. One is computerized attendance monitoring. Second, considerable project research has focused on identifying sources of variation in student attendance, including individual student characteristics, external factors, and school events. Finally, the most recent and ongoing project research has focused on the effects of differential student attendance (differential exposure to schooling) on student achievement. A major component of this research has focused on the methodological difficulties of estimating student *growth* in achievement attributable to schooling effects.

Status. This project is scheduled for completion in November 1976. It is possible the activity may be funded beyond this date.

Funding.

Fiscal year 1973	$30,808	(*6%)
Fiscal year 1974	41,401	(*8%)
Fiscal year 1975	49,849	(*10%)
Fiscal year 1976	45,000	(*12%)
Total.	167,058	

*Percent of institutional funding.

Accomplishments. A computerized attendance monitoring system has been developed, designed for use in monitoring student attendance patterns in high schools. Reports are in progress on the other activities.

Project SCHOOL ORGANIZATION PROGRAM - SCHOOL SYSTEM DECISIONMAKING

Objectives and strategies. This project is concerned with studying the ways in which quantitative data of the type generated by other program projects (e.g., attendance data, achievement growth data) currently are and can be used in the school's policymaking process. It is concerned with the social dynamics involved when school staff use quantitative data or research findings in an attempt to alter the school's social organization.

Status. This project originated in fiscal year 1976 and is ongoing.

Funding.

Fiscal year 1976	$20,000	(*5%)

*Percent of institutional funding.

Accomplishments. Appropriate reports relevant to the school policymaking process will be issued.

Project SCHOOL ORGANIZATION PROGRAM - THEORY CONSTRUCTION

Objectives and strategies. This project has as its primary concern the integration of the research literature, and in particular the research findings from the above projects, into a general theory linking structural properties of schools to informal social processes and important student outcomes.

Status. This project has been ongoing with the other projects. Its completion will be linked to the conclusion of the other projects.

Funding.

Fiscal year 1973	$9,894	(*2%)
Fiscal year 1974	12,056	(*2%)
Fiscal year 1975	25,000	(*5%)
Fiscal year 1976	14,000	(*7%)
Total.	60,950	

*Percent of institutional funding.

Accomplishments. It is expected that this project will produce a monograph which represents the major theoretical and empirical contributions of the school organization program and, as such, represents the final product of the research program.

Monitoring history.

Dates	Project officer	Activities
January 1973-September 1974	Spencer Ward, ORES/teaching and curriculum	Feb. 15, 1973, site visit by project officer. Apr. 28, 1973, site visit by project officer. Nov. 15, 1973, 2-day site visit by and review by Spencer Ward, NIE; Bill Spady, NIE; Roland Barth, Newton (Mass.) public schools; Charles Bidwell, University of Chicago; Glen Elder, University of North Carolina; Joseph Granis, Teachers College, Columbia University; Warren Standberg, Virginia Commonwealth University; Herb Walberg, University of Illinois.
September 1974-December 1975	William Spady, office of research/basic studies finance and productivity group/productivity division	Oct. 22, 1974, site visit by project officer. Apr. 18, 1975, site visit by project officer. Sept. 5, 1975, site visit by project officer and Michael Cohen.
December 1975 to present	Michael Cohen, finance and productivity group/productivity division	Written review of fiscal year 1976 proposal by Spencer Ward, Bill Spady, and Michael Cohen.

Project CAREER DEVELOPMENT AND SCHOOL PROCESSES PROGRAM

Objectives and strategies. A study will explore further the reasons for the generally earlier school attrition of women relative to men. This study will examine whether sex differences in career orientations, sex role socialization and the timing consequences of marriage explain this gap in educational attainments.

A study will examine selected antecedents and consequences of curriculum placement in secondary schools. The objective is to evaluate the relative influences on various student outcomes, including academic achievement and educational plans.

A study will examine the relative importance of student background characteristics (race, color, SES), and of curriculum placement in secondary school for access to alternative forms of postsecondary education. Enrollment in 4-year colleges and universities, 2-year colleges, and vocational/technical schools will be considered.

A study will evaluate the degree of bias in human capital estimations of various career returns to education (earnings and occupational status). The study will also estimate the dependency of both educational and labor market rewards on common antecedents (academic ability and SES).

Status. Work on the studies began December 1, 1975. Completion is estimated in November 1976.

Funding.

Fiscal year 1976 . . . . . $50,000 (*14%)

*Percent of institutional funding.

Accomplishments. Two reports have been issued. Other reports are in preparation.

Monitoring history.

Dates	Project officer	Activity
December 1975 to present	Ivan Charner	March 1976, site visit.

Project DIVERSITY OF HUMAN TALENTS PROGRAM - SCHOOLS AND MATURITY

Objectives and strategies. The objective of the project has been to develop a test of psychosocial maturity based on an integration of psychological and sociological perspectives. In the construction of the test of psychosocial maturity (PSM), attention was given to adolescents in three settings: Family, school, and peer groups. An unusually large amount of data was collected for purposes of establishing norms which were reliable and valid. The product is a test which identifies and measures factors which promote development toward psychosocial maturity in adolescents. The research strategy relied chiefly on survey methods and questionnaire data supplemented by "indepth" interviews. The PSM measures school effects on acquisition of values and attitudes.

Status. All work to be completed by November 30, 1976. Because of delay in providing funds for fiscal year 1976, an extension at no cost is likely to be requested.

Funding.

Fiscal year 1973	$91,235 (*13%)
Fiscal year 1974	149,974 (*28%)
Fiscal year 1975	144,349 (*29%)
Fiscal year 1976	49,500 (*13%)
Total.	435,058

*Percent of institutional funding.

Accomplishments. (1) The PSM test is being used in field, both by other investigators and by the States (South Carolina State Department of Education uses it in public schools, and the State of Oregon uses it in conjunction with NIE community-based career education project). (2) Approximately 15 center for school organization reports have been published. Two journal articles have been published (Journal of Youth and Adolescents), and two others have been accepted for publication. (3) The study will result in a book to be published by Jossey-Bass in 1977, tentatively titled: *Developments toward Psychosocial Maturity: A Study of Adolescents.*

COMPLETED OR TERMINATED NIE PROJECTS

Project CAREERS AND CURRICULA PROGRAM

Objectives and strategies. The general goal of this program was to organize and to explain our knowledge of vocational behavior from birth to death by exploring the usefulness of a theory of careers, and to create vocational devices, plans, and systems to help people adapt more successfully to vocational problems.

Status. CSOS Report No. 165, dated December 1973, embodies the project's findings. In all, 18 reports were prepared by the contractor.

Funding.

Fiscal year 1970	$20,000	(USOE)	(*31%)
Fiscal year 1971	54,635	(USOE)	(*10%)
Fiscal year 1972	62,685	(USOE)	(*9%)
Fiscal year 1973	164,363	(NIE)	(*20%)
Total.	301,683		

*Percent of institutional funding.

Accomplishments. The theory was strengthened by more than 120 empirical tests and led to some practical outcomes: A well-established theoretical typology for organizing occupational data; a self-directed vocational guidance system; and the stimulation of related devices, career materials, and research.

Monitoring history.

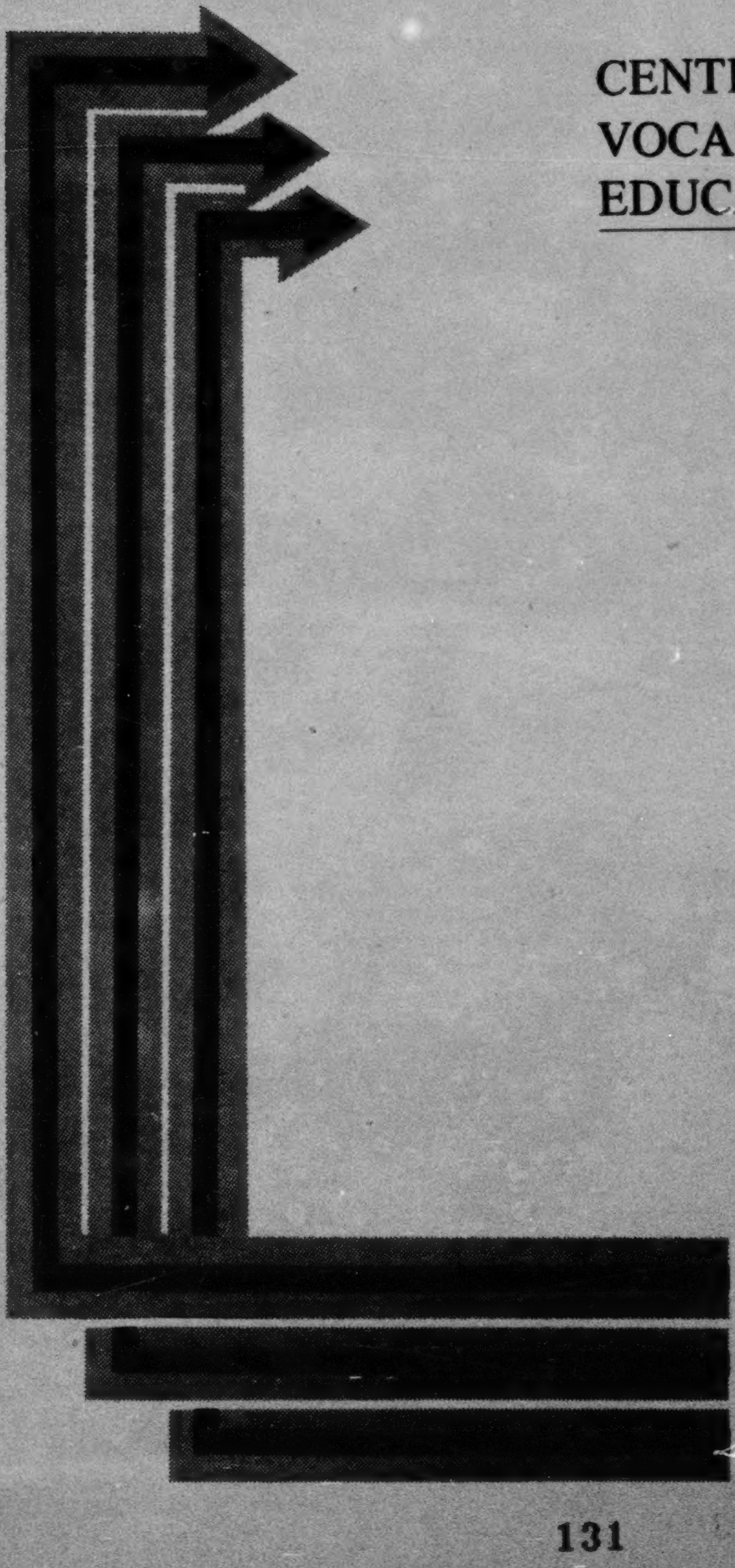
Dates	Project officer	Activities
1970– December 1973	Lance Hodes	Apr. 10, 1973, site visit. Feb. 25, 1974, final report accepted.

Project SCHOOL ORGANIZATION PROGRAM - REWARD STRUCTURES

There are two work units of the Reward Structures project which were terminated prior to completion as a result of funding limitations. The two projects are as follows:

- Reward Structures (Achievement Growth). This project, which was terminated at the end of fiscal year 1974, had as its research focus a concern with methodological and statistical issues associated with the estimation of student achievement growth. Some of the research in this area is being continued in the Reward Structures (Attendance) project. Funding in fiscal year 1973 was $26,985 and in fiscal year 1974 was $48,785.

- Reward Structures (Grades). This project was terminated for lack of funds after only 1 year of existence, though some of the conceptual framework and research from this project appears to have been continued in the research on Task Structures. The research in this unit was concerned with the effects of variability in structural dimensions. Considerations included whether the bases for reward were individual students or student groups, and whether achievement was evaluated competitively, independently, or cooperatively. Funding in fiscal year 1974 was $30,732.



CENTER FOR VOCATIONAL EDUCATION

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CENTER FOR VOCATIONAL EDUCATION

Mission

The Center for Vocational Education at the Ohio State University was established and initially funded in March 1965 under section 4(c) of the Vocational Education Act of 1963.

The Center for Vocational Education (CVE), while national in scope and mission, is an integral unit of the Ohio State University. CVE's mission is viewed as supportive of the mission of the Ohio State University and the relationship has been mutually beneficial.

The mission of the Center for Vocational Education is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning and preparation. CVE fulfills its mission by generating knowledge through research, developing educational programs and products, evaluating individual program needs and outcomes, installing educational programs and products, operating information systems and services, and conducting leadership development and training programs.

CVE has experienced consistent growth in its 11 years of operation and continues to contribute to positive change in vocational and career education. The organization has performed high quality, programmatic R. & D. on pervasive and persistent problems of national significance as acknowledged by constituencies in vocational and career education. It is recognized as a successful, nationally oriented, university-based, interdisciplinary, research and development center in vocational and career education with a comprehensive set of capabilities and a mature performance capacity which are pragmatically focused.

It has been CVE's long-term strategy to carry out its mission through the functions of research, development, advanced training, dissemination, and evaluation while maintaining a balance between theory development and resolution of problems of practice.

CVE has completed more than 140 projects and produced a wide array of products, services, and information which has been made available to national and international audiences. CVE's project activities have contributed to its own planned growth and development. Research evidence,

Table 1. Summary of CVE outreach

Nature of outreach	Extent of outreach
Leadership seminars/conferences	10,972 Participants 320 Institutions/agencies 50 States
Major collaborative arrangements	230 Efforts 42 National institutions/agencies 50 States
Publications	351 Documents 269,500 Distributed
Annual field-site activity (fiscal year 1976)	84 Locations 25 States 67,707 Participants
Request for publications, information, and technical assistance (quarterly average, fiscal year 1975)	462 Telephone requests 1,240 Letter requests 176 Visitor requests
Annual national project advisory committee (fiscal year 1976)	20 Committees 205 Persons 39 States 12 Types of institutions/agencies represented
Annual utilization of external consultants (contract year 1975)	255 Persons 27 States 136 Institutions/agencies represented
Annual international visitors (contract year 1975)	61 Foreign visitors 24 Countries represented
Visiting staff	33 Persons 30 Institutions/agencies represented
Graduate research associates recruitment scope	251 Persons 37 States 4 Foreign countries
Senior professional staff recruitment scope	209 Persons 40 States

documented client needs, governmental and institutional policies, and legislative mandates have formed the base for planning and priority-setting processes. Long-range and annual plans are formulated and priorities established. These plans and priorities have focused continuously upon the important problem areas in the fields of vocational and career education including management and planning, evaluation, program development, guidance, personnel development, diffusion, curriculum development, and information needs.

The most important resource CVE brings to bear on these problems is its professional staff with varied educational and experiential backgrounds, enhanced through service to diversified clientele on a wide range of problems. CVE has successfully utilized the consortium approach involving State departments of education, local education agencies, and other universities from across the Nation. This has resulted in networks of agencies and linkages to practitioners in the field.

As a recognized leader in vocational and career education R. & D., CVE serves as a focal point and fulcrum for the R. & D. efforts of others. CVE catalyzes and energizes relevant resources and activities in vocational and career education R. & D. at other levels and locations. This leadership role in the R. & D. community includes coordinating and orchestrating activites on a nationwide basis.

CVE has a broad constituency base which includes National, State, and local level education agencies, professional associations, and organizations in both the public and private sector. Through this constituency base, cooperative university relationships, and demonstrated capabilities, CVE is a dynamic and viable R. & D. organization in the field of vocational and career education. (See table 1.)

Governance

The Center for Vocational Education is an integral organizational unit of the Ohio State University, participating in the benefits of full membership in the university family and subject to its policies, regulations, and administrative procedures. The CVE director reports to the provost of the university. As associate dean for the college of education, and for the college of agriculture and home economics, the CVE director is able to coordinate CVE's program with other university units. The organizational placement and relationships of CVE within the university is designed to optimize strengths and capacities of the total organization.

Figure 1. Organizational structure

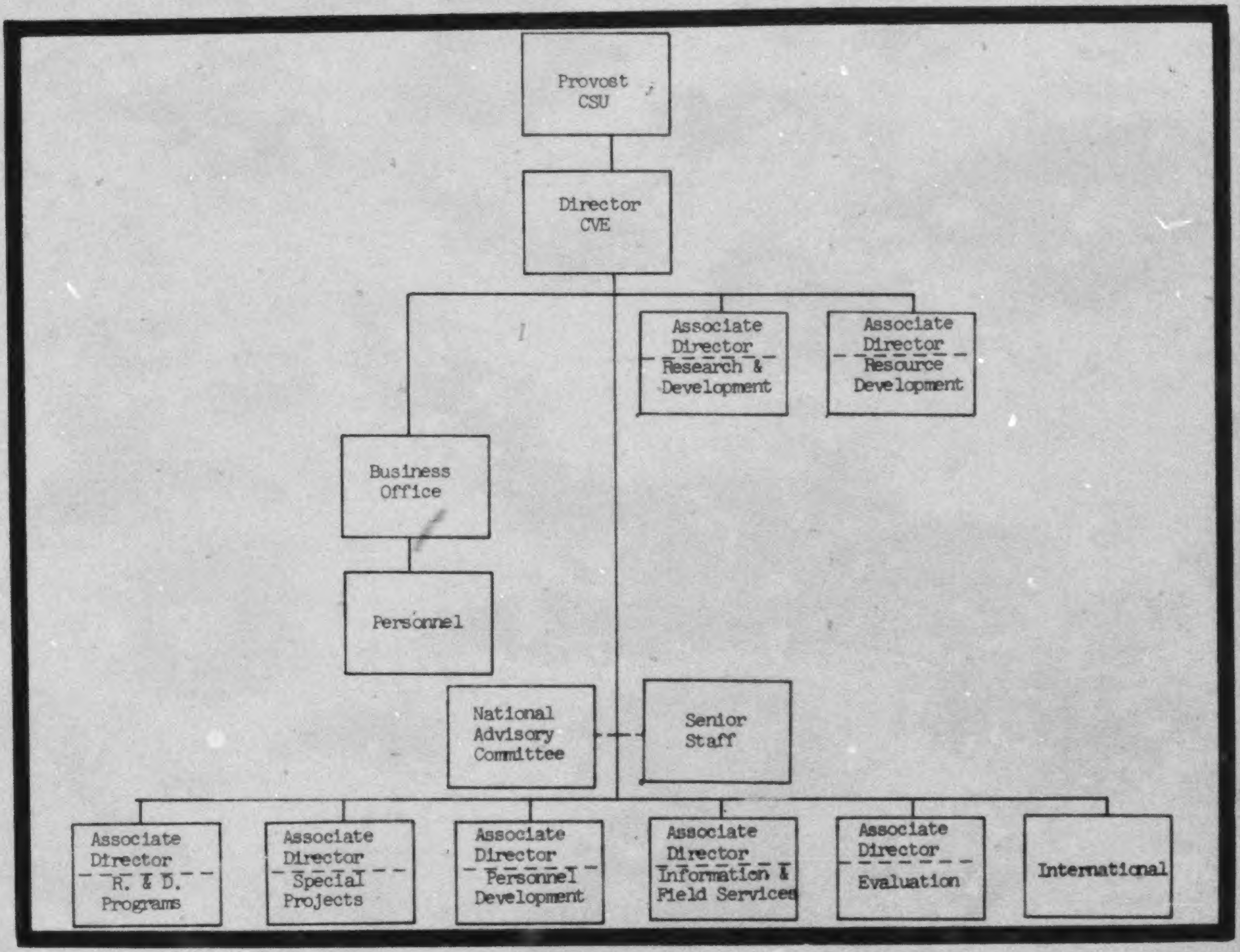
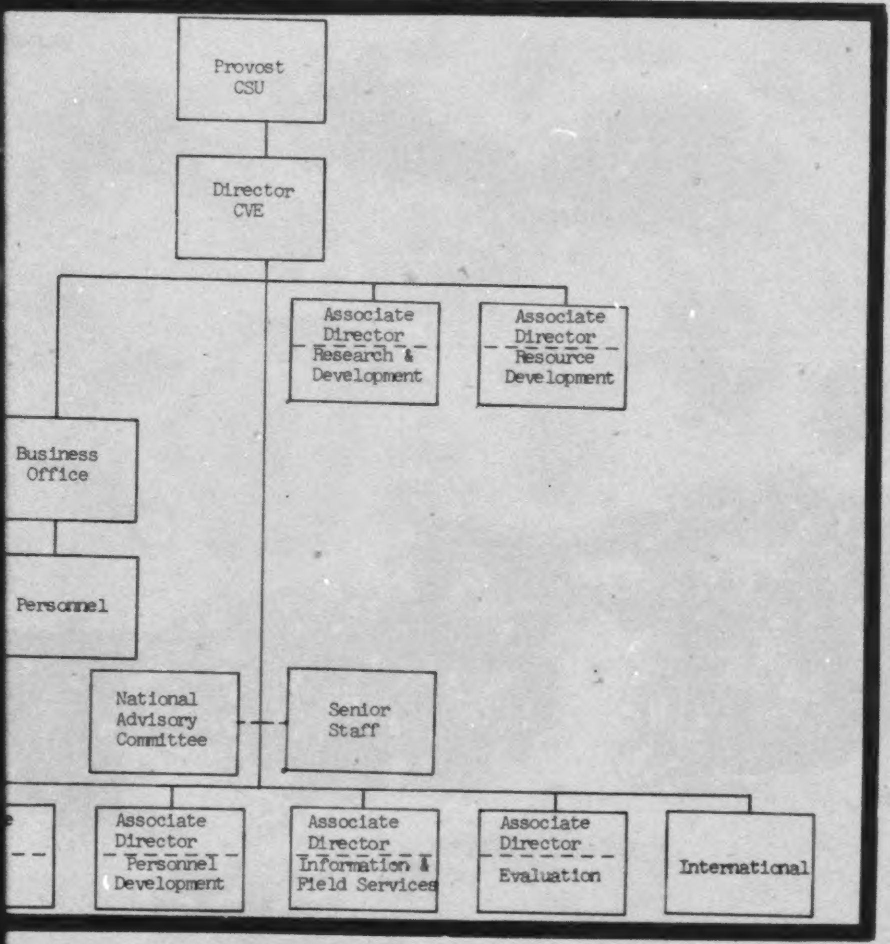

Provost CSU
Director CVE
Associate Director Research & Development
Associate Director Resource Development
Business Office
Personnel
National Advisory Committee
Senior Staff
Associate Director R. & D. Programs
Associate Director Special Projects
Associate Director Personnel Development
Associate Director Information & Field Services
Associate Director Evaluation
International

Figure 1. Organizational structure


Provost CSU
Director CVE
Associate Director Research & Development
Associate Director Resource Development
Business Office
Personnel
National Advisory Committee
Senior Staff
Associate Director Personnel Development
Associate Director Information & Field Services
Associate Director Evaluation
International

All professional personnel are full-time employees of CVE. The professional staff have faculty equivalent status in the university. CVE has a national advisory committee of 15 members representing an extensive range of constituencies. The advisory committee, appointed by the president of the Ohio State University, has functioned in both a review and advisory role to CVE management.

Management

The Center for Vocational Education is organized to cope with the project mode of support while endeavoring to maximize the advantages of functional thrusts. An organizational chart of CVE is presented in figure 1.

CVE operates in a participative management style, that uses an extensive information system to facilitate organized planning and evaluation activities. An annual management planning meeting and similar self-renewal activities assist CVE's preparation of multiyear goals and annual plans. Each division develops annual divisional needs. CVE policies and operating procedures are defined by an accessible manual, updated annually.

Management techniques (PERT, MBO, etc.) and procedures (contract initiation, quarterly reviews, contract closeout, etc.) are institutionalized. Current and accepted business and personnel office practices and modern automated systems are operational.

Quality assurance is a functional responsibility of the evaluation division. The associate director for the evaluation division reports to the CVE director. Planning and monitoring is supported by a management informations system that serves CVE management and all operating projects.

Organizational planning and development, policy formulation, self-evaluation, and decisionmaking actions involve two CVE management groups: the executive committee and the management team. Each division is managed by an associate director with the assistance of project directors who have operational responsibilities. Many CVE projects utilize national advisory committees. There are 20 national project advisory committees comprised of 205 individuals currently active at CVE.

Staff

CVE's competent, interdisciplinary staff includes 248 full-time equivalents, 149 of which hold academic degrees, representing more than 32 specific academic fields. Thirty-four professional staff hold degrees in vocational education, 51 staff in other areas of education, and 64 staff hold degrees in areas outside of education. CVE personnel hold 51 doctoral, 2 educational specialist's, 48 master's, and 48 bachelor's degrees.

The diverse training and experience and the extensive interaction of CVE staff provides the flexibility needed to solve client needs and problems. CVE employs a differentiated staffing model aimed at utilizing each staff member's fullest potential while fulfilling contract obligations with maximum reliability, precision, and efficiency. The ratio of professional to administrative personnel is maintained at a level that insures efficiency and maximum productivity of the organization's operation.

Seventy-five percent of CVE's full-time professional staff have been recruited outside of the Ohio State University from State departments of education, universities, local schools, and government and private research organizations across the country. Many staff members have experience as employees and as administrators in business and industry fields. Sixteen professional staff hold nonsalary, tenure-accruing, academic appointments in three of the university's colleges and schools.

The technical and support staffs strengthen CVE with their varied backgrounds of education, training, and experience. Graduate students are employed as graduate research associates halftime while studying for advanced degrees. The majority of these graduate students are vocational educators who have temporarily left the field to pursue advanced degrees. They bring a diverse wealth of practical experience to the organization. Twenty-seven percent of CVE's 67 clerical personnel hold higher education degrees. Clerical and 34 part-time support personnel are assigned to the 5 divisions and support services area according to their expertise and the needs of the organization.

Staff Development

Staff development programs and activities are provided by CVE in an effort to support continued growth of professional, support, and clerical personnel and to guarantee the future viability of the organization through their renewal.

CVE provides a staff development program for its professional staff through a number of activities. The program has both centralized and decentralized dimensions and is based on centerwide, divisional, and individual staff needs. It is from these planning sources that activities for individual professional staff and centerwide efforts are formulated for the year.

In 1974, CVE initiated a staff development seminar series for professional staff. Each seminar is conducted by a recognized scholar in specific areas of vocational and career education.

Professional staff may enroll in or audit university courses of particular interest. Periodic workshops, both centerwide and in divisions, are conducted to update professional staff in technical planning; project management; advances in instructional technologies; improvements in research, development, and evaluation methodologies; and other areas pertinent to CVE's mission. Training and development sessions are planned and conducted for CVE's civil service (clerical and support) employees.

Professional staff often are called upon to participate in and present papers at State, regional, and National conferences. They also have the opportunity to author publications and participate in professional associations. These activities contribute to professional growth and continued recognition.

Training Provided to Others

At the outset, CVE recognized the need for leadership training in vocational and career education. It has been a mechanism for disseminating the processes and products emanating from research and development as well as increasing leadership capability in the field. One of the pivotal concepts in CVE's long-range strategy for effecting change is the recognition of the key role of State leadership personnel in vocational and career education. In the main, these individuals are viewed as CVE's primary target audiences. Since these individuals occupy key leadership positions and shape administrative policies, efforts have been directed toward extending their vision, increasing their competency, and improving their effectiveness. This results in a multiplying effect.

The territories of Guam, Puerto Rico, and the Virgin Islands, and 50 State departments of education have had over 10,800 staff members participate in over 313 CVE-sponsored national leadership activities. The annual leadership seminar for State directors of vocational education, personnel development, R. & D. personnel, vocational leaders in correctional institutions, and local vocational education directors of large city schools have been virtually institutionalized because of their overwhelming acceptance. Building on

CVE's early and continuing interest in the career development of women, a national conference on the topic was held in 1975 with over 250 participants in attendance. In addition, 61 educational leaders from 24 foreign countries have visited or have been involved in CVE activities during the past 12 months.

Approximately 30 professionals are employed annually by CVE as graduate research associates. Since 1965, CVE has recruited 251 professionals from 37 States. Under the Professional Development Act of 1967, several additional professionals have completed 1- to 6-month internships at CVE.

Scholars are encouraged to spend their sabbatical leaves at CVE, and to work on a variety of topics relating to vocational, technical, and career education. Thirty-three prominent leaders in education from 30 institutions have completed sabbaticals with CVE including college of education deans, vocational education department chairpersons, and professors of education.

Institutional Relationships

CVE has employed the consortia approach extensively in the solution or amelioration of problems in vocational and career education. CVE uses the unique capacities and interests of supporting disciplines, institutions, and agencies on major problems.

CVE's relationships with various institutions and agencies demonstrate contractual and communicative cooperation and collaboration. The nature and extent of a particular problem or activity determines the kinds of institutions and arrangements that will be helpful. Primary consideration is given to assembling a critical mass of relevant talent from a variety of institutions and agencies and brought to bear upon the problem.

CVE has completed 230 consortia efforts. Currently, 24 arrangements involving 78 educational agencies and institutions are in effect. CVE has continued to support the activities of State research coordinating units which are making a significant impact on educational programs in their respective States.

CVE's efforts in the following areas illustrate how it is performing its goal of capacitating others to impact on vocational R. & D. problems:

- State Vocational Education Research Coordinating Units (RCU's). CVE and State RCU's have engaged in cooperative efforts to develop an information dissemination network linked to ERIC and AIR/ARM. This has included development of a guide, a pilot program for 7 States, a major survey of 3,200 potential users, training workshops for information resources director, and an ERIC training package. RCU's also have helped in needs assessment, priority setting, data gathering, and document acquisition.

- National Network for Curriculum Coordination in Vocational and Technical Education (NNCCVTE) CVE has worked with NNCCVTE to develop the "Curriculum Development Projects in Progress" section of AIM/ARM and to plan a major national curriculum diffusion conference (Carbondale, Ill., in June 1974).
- ERIC Clearinghouse in Career Education (ERIC/CICE). CVE works with ERIC/CICE to input AIM/ARM documents to Resources in Education and to keep AIM/ARM and ERIC compatible.

Facilities

The Center for Vocational Education is located in three adjacent buildings on the western portion of the Ohio State University campus in Columbus, Ohio. These modern facilities, built with funds from the Ohio State University board of trustees investment portfolio, provide attractive and well-furnished offices for CVE's staff and support functions. CVE facilities (over 50,000 square feet of available space) are described here in relation to function.

- Conference facilities. Four conference rooms and a number of smaller meeting areas are located within these buildings. A number of smaller breakout rooms and a staff lounge are available in each building.
- Product utilization capacity. CVE product utilization capability includes the development and execution of strategies for the diffusion of educational research and development products, including consumer surveys; product packaging and production; distribution and service. CVE's computerized mailing list of about 14,000 professional persons assists ongoing communications with the field through newsletters, dissemination conferences, and exhibits.
- CVE research library. CVE's research library on vocational, technical, and career education is one of the most comprehensive and complete in the world. The facility includes a growing collection of over 37,000 documents, 2,300 dissertations, 400 periodical subscriptions, a complete ERIC

microfiche collection which exceeds 110,000 titles, and microfilm/microfiche readers and printers. The research library provides circulation, manual reference searches, interest profile design, and search strategy design for computer searches. CVE's library has an online interactive computer terminal capable of searching 25 data bases in the Lockheed dialog system.

- Computer services. Included in CVE's support area is a computer services section that provides modern, flexible, economical, and timesaving support necessary to assist CVE in fulfillment of its mission. An experienced and capable computer services staff of systems analyst, applications programers, and EDP machine operators provide services to CVE. Among the university computer facilities available to CVE are an IBM 370/145 and an IBM 370/165. In addition to the availablility of the Ohio State University equipment, CVE has inhouse data processing equipment.
- Media services. The media services area of CVE helps make CVE products available to the public by providing internal exptertise in writing, editing, graphic art, camera-ready copy preparation, high-speed duplication and binding, and audiovisual production. A variety of materials are produced and services provided by media services to CVE and its projects. The media services group has beeen extensively involved in the production of K-12 curriculum materials for CVE's Comprehensive Career-Education Model and Occupational-Exploration program and in compiling classroom resource kits to accompany these materials; thus, its staff members are experienced in integrating educational materials into conventional curriculum.
- University support. University services provide a backup capability for those systems available to CVE to insure that deadlines and quality requirements are met. They include those services provided by the department of photography and cinema, the statistics laboratory, the teaching-aids laboratory, the telecommunications center, and the university library system.
- Location. Located in Columbus, Ohio, the Center for Vocational Education also provides an ideal central location from which to serve the Nation. It is located within a 600-mile radius of more than 60 percent of the Nation's population. It is serviced by eight major airlines, four railroads, and one of the most modern interstate highway systems in the country.

Funding History

Since its inception, 62 outside sponsors have funded research, development, advanced training, dissemination, and evaluation efforts within the scope of CVE's mission. CVE's overall funding pattern over the past 11 years clearly demonstrates continued growth and diversification of its support base.

CVE's support base to date for fiscal years 1975 (actual) and 1976 (projected) is derived from 50 separate contracts and grants. This total estimated support base of $8,646,880 for the 2 fiscal years represents a Federal support rate of 72 percent and an NIE support rate of 38 percent.

The information presented in table 2 and figure 2 depicts CVE's funding history, including both NIE and non-NIE funds. The percentage of funds from both categories of sources since 1965 has been noted, including royalty income. The percentage of institutional funding represented by each funding source is provided. Both table 2 and figure 2 indicate funds by source only.

Table 2. Funding history

Appro

Fund Source	FY 65	FY 66	FY 67	FY 68	FY 69	FY 70	FY 71	FY 72	FY 73	FY 74	FY 75	Projected FY76
Federal Agencies												
Office of Education	$706,288	232,480	1,436,088	1,724,716	1,520,783	1,380,231	2,769,812	10,446,834	4,144,388	874,691	1,080,834	1,286,135
	100%	100	100	100	100	94.	97.7	99.0	62.5	19.8	24.6	32.7
National Institute of Education									2,282,242	2,165,116	1,736,000	1,886,580
									34.4	64.0	39.7	38.4
Dept. of Transportation						90,332	66,817		54,378		57,966	
						6.	2.3		0.8		1.3	
Dept. of Justice											143,267	
											3.3	
Bureau of Indian Affairs											174,637	
											4.0	
Dept. of Commerce								100,000				
								0.9				
Bureau of Prisons											98,000	
											2.2	
Dept. of Navy										2,121		
										0.1		
Total Federal	$706,288	232,480	1,436,088	1,724,716	1,520,783	1,496,063	2,836,729	10,546,934	6,480,978	2,961,228	3,277,099	2,964,303
	100%	100	100	100	100	100	100	99.9	97.7	83.9	76.0	69.1
States									87,471	103,079	227,477	121,89
									1.3	3.0	5.2	2.8
Private									61,088	346,753	623,127	890,17
									1.0	10.3	14.3	20.9
Local Schools										98,079	150,000	1
										2.9	1.1	3.3
Post-secondary Educational Institutions								8,280			40,050	137,
								0.1			4.4	4.0
Totals	$706,288	232,480	1,436,088	1,724,716	1,520,783	1,496,063	2,836,729	10,557,333	6,639,615	3,406,000	4,369,953	4,277,
	100%	100	100	100	100	100	100	100	100	100	100	100
Royalty Income										95	895	11
										0	0	0

Table 2. Funding history

Approved March 30, 1976

Fund Source	FY 65	FY 66	FY 67	FY 68	FY 69	FY 70	FY 71	FY 72	FY 73	FY 74	FY 75	Projected FY76		Summary FY73-76
Federal Agencies:														
Office of Education	$706,280	232,480	1,436,680	1,724,716	1,520,793	1,386,231	2,769,912	10,448,934	4,144,260	874,001	1,060,834	1,300,125		7,288,318
	100%	100	100	100	100	94.	97.7	99.0	62.5	18.8	24.5	32.7		36.0
National Institute of Education									2,282,242	2,186,116	1,736,000	1,560,258		7,765,700
									34.4	64.0	39.7	38.4		41.5
Dept. of Transportation						90,232	65,817		54,378		57,840			112,218
						6.	2.3		0.8		1.3			0.6
Dept. of Justice											143,287			143,287
											3.3			0.8
Bureau of Indian Affairs											174,427			174,427
											4.0			0.9
Dept. of Commerce								100,000						
								0.9						
Bureau of Prisons											90,000			90,000
											2.2			0.5
Dept. of Navy										2,121				2,121
										0.1				0
Total Federal	$706,280	232,480	1,436,680	1,724,716	1,520,793	1,476,463	2,835,729	10,548,934	6,480,878	3,062,238	3,277,388	2,860,383		15,674,185
	100%	100	100	100	100	100	100	99.0	97.7	83.9	75.0	66.1		83.2
States									87,471	103,079	227,477	121,824		539,851
									1.3	3.0	5.2	2.8		2.9
Private									61,065	340,703	623,127	956,127		1,980,092
									1.0	10.3	14.3	20.9		10.3
Local Schools										95,879	192,000	160,000		490,300
										2.9	1.1	3.2		2.6
Post-secondary Educational Institutions								8,289			46,833	137,226		184,059
								0.1			4.4	4.0		1.0
Totals	$706,280	232,480	1,436,680	1,724,716	1,520,793	1,476,463	2,835,729	10,557,223	6,629,416	3,600,898	4,368,923	4,277,597		18,858,350
	100%	100	100	100	100	100	100	100	100	100	100	100		100.0
Royalty Income										95	630	116		841
										0	0	0		0

Figure 2. Funding history

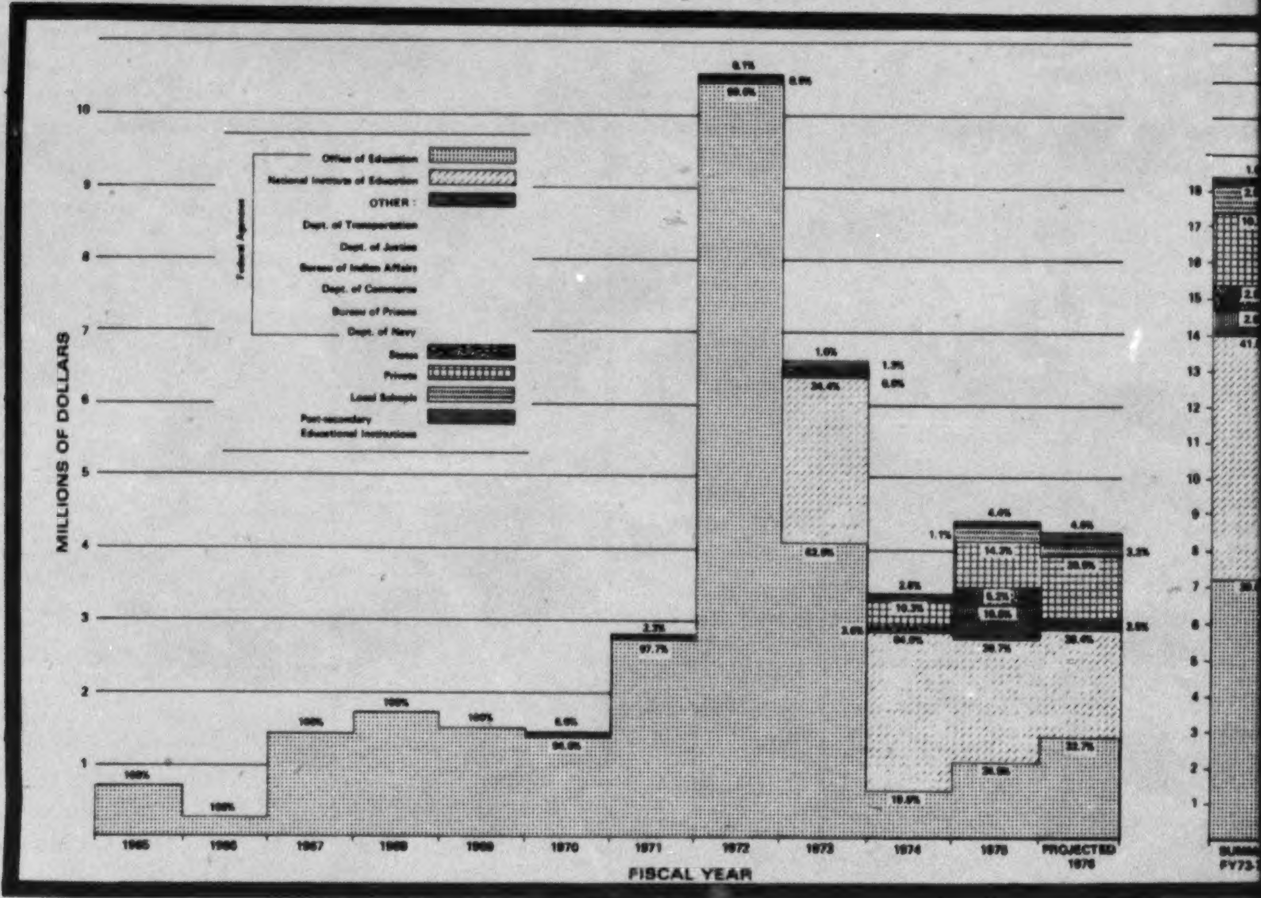


Figure 2. Funding history

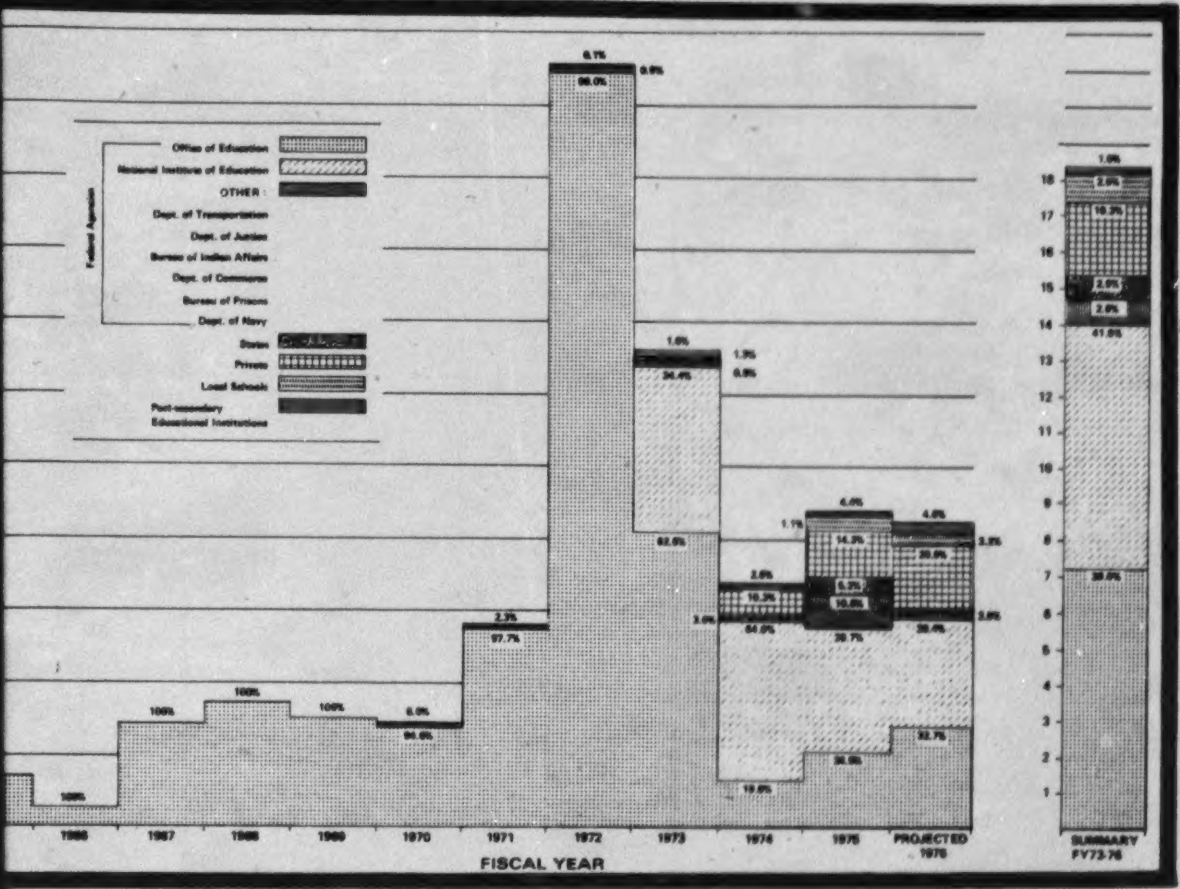


Table 3. Current NIE projects

Project	Objectives and strategies	Status	Fudding	Monitoring history	Accomplish
Occupational Exploration Program	The Occupational Exploration program assists 7th and 8th graders to learn about careers, to acquire work experience, and to relate this experience to personal attitudes, interests, and aptitudes. Through a previous subcontract with HRRO, CVE developed 12 occupational "clusters." The program will include 1 simulation module, one community-involvement module, and 1 occupational tional information resource module in each of the 12 clusters.	This project is now in its third and final year of development. Negotiations are imminent for a publisher. The products are under review or are in process of classroom testing.	Fiscal year: 1973....$296,946 1974.....399,952 1975.....394,851 Total *1,091,749 *NIE funded.	Dates December 1974 to present. Project officer Bob Wise Activities December 1974, major review of prototype materials. June 1975, major review with outside panelists. December 1975, site visit.	Certain process mi achieved, notably and implementation project monitoring
Career Education National Forum	The second national career education forum, held in Washington, D.C., February 8-11, 1976, provided an opportunity discussion of issues in secondary and postsecondary career education.	This project is complete save for publication of the papers delivered at the forum.	Fiscal year: 1976... *$61,178 *NIE funded.	Dates July 1975 to present. Project officer David Hampson Activities Monthly site visits or consultation at NIE.	The forum brought 600 career educati tioners and schola mutually profitabl of information. T ings will be publi
Evaluation of Executive High School Internship Program	The Executive High School Internship program provides exploratory occupational experiences for high school seniors in mid- and high-level organizational settings. Founded in 1971, EHIP has spread to over 25 school systems. The evaluation will focus upon an assessment of cognitive and affective aspects of student	The project has received its initial funding and discussions are under way between CVE, EHIP, and LEA's. CVE is exploring the feasibility of an alternative evaluation design.	Fiscal year: 1976...*$100,486 *NIE funded.	Dates July 1975 to present. Project officer David Goodwin Activities January 1976, consultation at NIE. February 1976, site visit.	It is anticipated report, due April used by local scho contemplating the EHIP and by decisi interested in comp effectiveness of t with other career programs.

Table 3. Current NIE projects

nd strategies	Status	Fudding	Monitoring history	Accomplishments
Exploration th and 8th about careers, xperience, s experience udes, inter- es. Through tract with ed 12 occupa- " The program mulation nity-involve- l occupational n resource the 12	This project is now in its third and final year of development. Negotiations are imminent for a publisher. The products are under review or are in process of classroom testing.	Fiscal year: 1973....$296,946 1974.....399,952 1975.....394,851 Total *1,091,749 *NIE funded.	Dates December 1974 to present. Project officer Bob Wise Activities December 1974, major review of prototype materials. June 1975, major review with outside panelists. December 1975, site visit.	Certain process milestones were achieved, notably the design and implementation of a project monitoring scheme.
al career held in February 8-11, opportunity ues in tsecondary	This project is complete save for publication of the papers delivered at the forum.	Fiscal year: 1976... *$61,178 *NIE funded.	Dates July 1975 to present. Project officer David Hampson Activities Monthly site visits or consultation at NIE.	The forum brought together over 600 career education practitioners and scholars for a mutually profitable exchange of information. The proceedings will be published.
n School n provides ational igh school nd high-level ttings. EHIP has school systems, ll focus upon cognitive and of student	The project has received its initial funding and discussions are under way between CVE, EHIP, and LEA's. CVE is exploring the feasibility of an alternative evaluation design.	Fiscal year: 1976...*$100,486 *NIE funded.	Dates July 1975 to present. Project officer David Goodwin Activities January 1976, consultation at NIE. February 1976, site visit.	It is anticipated that the final report, due April 1977, will be used by local school officials contemplating the adoption of EHIP and by decisionmakers interested in comparing the effectiveness of the program with other career exploration programs.

Project	Objectives and strategies	Status	Funding	Monitoring history	Accompli
	development, the role of the EHIP coordinator, and the costs of a viable program.				
In-School Work Experience	The contractor is reviewing and analyzing the state of current practice with respect to in-school career exploration programs. In conjunction with an advisory panel, CVE is developing an annotated listing of existing programs, an analysis of these programs, a listing of the legal and institutional barriers to implementation of these programs, and suggestions for several conceptual variations of the programs combining existing practice with theory and research.	The project has entered the first stages of developing a theoretical framework and identification of individuals to sit on the advisory panel.	Fiscal year: 1976...*$164,850 *NIE funded.	Dates July 1975 to present. Project officer David Goodwin Activities January 1976, consultation at NIE. February 1976, site visit.	It is anticipated product, due in A will be useful to practitioners see implement new ins experience progra improve existing
Performance-Based Professional Education Curricula Project	Vocational education programs have undergone rapid changes and expansion over the last few years. New and expanded programs require an improvement in the preparation of teachers. Many preservice and inservice teacher-education programs do not develop adequately the professional practical teaching skills which vocational teachers most need. This program is intended to improve this situation by developing new curriculums for vocational	The project has entered the final testing and development phase. An agreement for commercial publication should be finalized by June 1976.	Fiscal year: 1972...*$986,791 1973....**61,778 ***742,167 1974..***394,000 1975..***336,693 1976..***145,000 Total 2,666,429 *OE funded, including fiscal year 1971 carryover funds. **OE funded. ***NIE total - $1,617,860	Dates 1. 1972-September 1975 2. September 1975 to present. Project officer 1. Lance Hodes 2. David Hampson Activities 1. Site visits and reviews. 2. September 1975, site visit. February 1976, consultations in Washington.	It is anticipated project will have and tested 100 te curriculum module cifically at prof formance requirem tencies). Fiftee ties and colleges ting with the cen advanced testing utilizing the cur preservice and in vocational teacher programs.

strategies	Status	Funding	Monitoring history	Accomplishments
role of the r, and the costs ram.				
s reviewing and ate of current spect to in- ploration pro- nction with l, CVE is notated listing rams, an e programs, legal and rriers to f these ggestions for al variations combining e with theory	The project has entered the first stages of developing a theoretical framework and identification of individuals to sit on the advisory panel.	Fiscal year: 1976...*$164,850 *NIE funded.	Dates July 1975 to present. Project officer David Goodwin Activities January 1976, consultation at NIE. February 1976, site visit.	It is anticipated that the final product, due in April 1977, will be useful to school practitioners seeking to implement new inschool work-experience programs or to improve existing ones.
tion programs apid changes er the last and expanded an improve- aration of preservice acher-education develop rofessional ng skills teachers program is ove this eloping new vocational	The project has entered the final testing and development phase. An agreement for commercial publication should be finalized by June 1976.	Fiscal year: 1972...*$986,791 1973....**61,778 ***742,167 1974..***394,000 1975..***336,693 1976..***145,000 Total 2,666,429 *OE funded, including fiscal year 1971 carryover funds. **OE funded. ***NIE total - $1,617,860	Dates 1. 1972-September 1975 2. September 1975 to present. Project officer 1. Lance Hodes 2. David Hampson Activities 1. Site visits and reviews. 2. September 1975, site visit. February 1976, consultations in Washington.	It is anticipated that the project will have developed and tested 100 teacher education curriculum modules aimed specifically at professional performance requirements (competencies). Fifteeen universities and colleges are cooperating with the center in the advanced testing phase in utilizing the curricula in preservice and inservice vocational teacher education programs.

Project	Objectives and strategies	Status	Funding	Monitoring history	Accomplish
	teacher education. Approximately 100 learning packages, or teaching modules, and implementation materials are being designed for use in all vocational teaching fields. Each module centers on specified teaching competencies identified through prior center research. Modules are selected by teacher educators and to correspond with individual teacher needs.				
Career Planning Support System Project	Task A. Millions of high school students are believed to graduate every year lacking adequate skills to choose and plan careers. One problem is insufficient guidance to help them pursue fulfilling careers and to make decisions affecting their futures. Research has shown that guidance programs have not been effective in providing career-planning services to students. This project is designed to rectify that situation by providing a new system. The package of materials permits a school to fully redesign, plan, implement, and evaluate an upgraded program unique to its setting. Special provisions are included to be responsive to minorities, women, and community involvement.	Task A. Final revisions stage. Task B. Work began Feb. 1, 1976.	Fiscal year: 1972...*$600,748 1973....**47,246 ***567,625 1974..***789,920 1975..***602,435 1976..***167,000 ***176,477 Total 2,951,451 *OE funded, including fiscal year 1971 carryover funds. **OE funded. ***NIE total - $2,303,457	Dates 1. 1973 to present. 2. July 1975 to present. Project officer 1. Lance Hodes Ella Kelly (Task A) 2. Ron Bucknam (Task B) Activities 1. November 1975, site visit. December 1976, meeting with contractor. 2. September 1975, consultation at CVE. December 1975, consultation at CVE.	Task A. Complete field test of syst which has demonstr utility for upgrad planning programs, supportive product minorities, women, transition from sc work are being fin

trategies	Status	Funding	Monitoring history	Accomplishments
Approximate- ckages, or and implemen- re being n all g fields. s on competencies prior Modules are r educators with indivi- .				
of high school eved to r lacking choose and problem is nce to help lling careers ons affecting esearch has ce programs ective in planning nts. This ed to rectify providing package its a school , plan, aluate an unique to cial pro- ded to be orities, ity involve-	Task A. Final revisions stage. Task B. Work began Feb. 1, 1976.	Fiscal year: 1972...*$600,748 1973....**47,246 ***567,625 1974..***789,920 1975..***602,435 1976..***167,000 ***176,477 Total 2,951,451 *OE funded, including fiscal year 1971 carryover funds. **OE funded. ***NIE total - $2,303,457	Dates 1. 1973 to present. 2. July 1975 to present. Project officer 1. Lance Hodes Ella Kelly (Task A) 2. Ron Bucknam (Task B) Activities 1. November 1975, site visit. December 1976, meeting with contractor. 2. September 1975, consultation at CVE. December 1975, consultation at CVE.	Task A. Complete 12-State field test of system prototype which has demonstrated its utility for upgrading career planning programs. Additional supportive products for minorities, women, and the transition from school to work are being finalized.

Project	Objectives and strategies	Status	Funding	Monitoring history	Accomplish
	Task B. Here the focus is to provide useful tools to assist practitioners and developers of local career-education programs. Six activities are being undertaken, resulting in five products which are: (1) A handbook of measures for career education practitioners and developers, (2) a handbook for the improvement of locally devised instruments and measures, (3) a handbook on the utility and use of education audit techniques in local career education program accountability, (4) a handbook on the use and collection of qualitative data for local career education program assessment, and (5) a handbook on useful alternative models of assessment in local career education programs.				
Methods for Curriculum Content Derivation	Task A. Methods have been developed for generating and using occupational survey information to identify curriculum content most appropriate to preemployment occupational training. This study has concentrated upon the task-performance content of specific jobs, as it pertains to the selection of work-relevant content most warranting training attention. Task B. Complementing the task A concern for job-specific	Task A. Research and development of occupational survey and analysis methods is near complete for task-performance issues, to result in a 5-volume procedural handbook available after July 1976. This will expand upon and supersede an earlier procedural manual for constructing and using task inventories in a vocational education context. Nine interim	Task A. Fiscal year: 1972...*$277,105 1973....**21,827 ***262,200 1974..***308,000 1975..***304,508 1976......28,916 Task B. 1976..***292,500 Total 1,495,056 *OE funded, including fiscal year 1971 carryover funds.	Dates 1. 1973-November 1975 2. November 1975 to present. Project officer 1. Lance Hodes 2. Robert Stump Activities 1. Quarterly site visits (approximate).	Task A. Innovative to the identificati significant affecti conceptual aspects requirements have b generated, tried ou reported. The occu task survey approac been adapted to fea application in a br civilian labor mark The task staff have pated in two key se curriculum developm distributed program

trategies	Status	Funding	Monitoring history	Accomplishments
focus is to ls to assist developers ucation ivities en, resulting hich are: measures for ractitioners) a handbook t of locally s and ndbook on e of education n local career accounta- book on the of r local rogram) a handbook ive models ocal rograms.				
ave been rating and survey ntify most mployment ng. This ted upon e content s it ection ntent most attention. ing the task pecific	Task A. Research and development of occupational survey and analysis methods is near complete for task-performance issues, to result in a 5-volume procedural handbook available after July 1976. This will expand upon and supersede an earlier procedural manual for constructing and using task inventories in a vocational education context. Nine interim	Task A. Fiscal year: 1972...*$277,105 1973....**21,827 ***262,200 1974..***308,000 1975..***304,508 1976......28,916 Task B. 1976..***292,500 Total 1,495,056 *OE funded, including fiscal year 1971 carryover funds.	Dates 1. 1973–November 1975 2. November 1975 to present. Project officer 1. Lance Hodes 2. Robert Stump Activities 1. Quarterly site visits (approximate).	Task A. Innovative approaches to the identification of significant affective and conceptual aspects of job requirements have been generated, tried out, and reported. The occupational task survey approach has been adapted to feasible application in a broad, diverse civilian labor market context. The task staff have participated in two key seminars on curriculum development methods, distributed program reports to

Project	Objectives and strategies	Status	Funding	Monitoring history	Accomplish
	content, this task will explore the nature of more generally applicable skills which may be used in different occupational areas as well as within them. The object of study will be trainable skills, abilities, and competencies that are occupationally transferable.	reports have been published on the results of occupational task surveys, significance ratings of technical concepts, and work-related attitudes for workers in each of three different occupations used as research and tryout vehicles for the studies conducted in task A. In press is a report of a national survey of the activities, problems, and needs of curriculum developers. Task B. Work on this task has only recently been started. Three papers have been commissioned to synthesize the literature regarding what are transferable skills, what occupationally mobile people look like, and what we know about similarities among jobs.	**OE funded. ***NIE total - $1,167,208.	Activities (Continued) Annual reviews of planned scopes of work. Fall 1972, April and August 1973, major program reviews with panels of outside experts. August 1973, product review with outside specialist January 1974, OMB clearance of task inventory questionnaires. 2. April-May 1976, participation in meetings with employer representatives. February-May 1976, participation in meetings of task B working panel of consultants. Review of task B commissioned papers.	a wide array of se target audiences o planners and devel stimulated the cre clearinghouse to p sharing of task in The final procedur along with prior i reports, will make oped methods trans and usable by othe describing and ill the processes and Task B. Extensive awareness has been among educators, a of relevant discip the employer commu through newslette ments and meeting employer represent in three cities.

strategies	Status	Funding	Monitoring history	Accomplishments
k will explore e generally which may ent occupa- ell as within of study will ls, abilities, that are ansferable.	reports have been published on the results of occupational task surveys, significance ratings of technical concepts, and work-related attitudes for workers in each of three different occupations used as research and tryout vehicles for the studies conducted in task A. In press is a report of a national survey of the activities, problems, and needs of curriculum developers. Task B. Work on this task has only recently been started. Three papers have been commissioned to synthesize the literature regarding what are transferable skills, what occupationally mobile people look like, and what we know about similarities among jobs.	**OE funded. ***NIE total - $1,167,208.	Activities (Continued) Annual reviews of planned scopes of work. Fall 1972, April and August 1973, major program reviews with panels of outside experts. August 1973, product review with outside specialist January 1974, OMB clearance of task inventory questionnaires. 2. April-May 1976, participation in meetings with employer representatives. February-May 1976, participation in meetings of task B working panel of consultants. Review of task B commissioned papers.	a wide array of selected target audiences of curriculum planners and developers, and stimulated the creation of a clearinghouse to promote the sharing of task inventories. The final procedural handbook, along with prior interim reports, will make the developed methods transportable and usable by others, fully describing and illustrating the processes and results. Task B. Extensive task awareness has been stimulated among educators, academicians of relevant disciplines, and the employer community through newsletter announcements and meetings with employer representatives in three cities.

Table 4. Completed or terminated NIE projects

Project	Objectives and strategies	Status	Funding	Monitoring history	Accomp
Career Education Implementation: A Handbook for Strategy Development	The handbook is designed to assist career education project directors in the formulation of implementation strategies. Thirty techniques for implementing career education ideas are discussed in this resource book. Procedural guidelines based on scientific evidence are contained in a section of the handbook. These guidelines recommend ways to profile a career education practice and the conditions which are likely to influence its acceptance by teachers and administrators. Suggestions for assessing the impact of the implementation strategies contained in the handbook should be useful in the reformulation of implementation strategies. While local conditions differ from situation to situation, the use of the handbook should result in an effective and systematic infusion of career education concepts into educational settings.	There are three research reports on hand and a draft version of the handbook is being reviewed. A decision on how to disseminate the handbook is imminent.	Fiscal year: 1972...*$211,531 1973.....**9,043 ***108,708 1974..***146,250 1975...***91,502 Total 567,034 *OE funded, including fiscal year 1971 carryover funds. **OE funded. ***NIE total $346,450	Dates 1. 1974-November 1975 2. November 1975 to present. Project officer 1. Lance Hodes 2. C. B. Crump Activities 1. 1973-74, site visits. July 1974, review of prototype by career education project directors. 2. Fall 1975, major review of draft.	The ultimate acc course, will be t tion and use of t This will begin 1976.
Management Information System for Vocational Education	CVE has under development a comprehensive and generalized Management Information for Vocational Education (MISVE). MISVE addresses itself directly to the national concern for better planning and accountability through improved utilization of information. MISVE is specifically designed	Preliminary versions of system documentation and applications programs (edit, load, update) for use with the generalized data base management system computer software package selected for use with MISVE were received by NIE on March 13, 1976.	Fiscal year: 1972..*$712,860 1973...**50,076 1974*** 851,542 1975. **123,380 Total 1,737,858 *OE funded, including fiscal year	Dates 1. 1973-November 1975 2. November 1975 to present. Project officer 1. Lance Hodes 2. Robert Stump	Following field is intended for operation by Sta of vocational ed and school distr extensive vocati enrollments.

Table 4. Completed or terminated NIE projects

strategies	Status	Funding	Monitoring history	Accomplishments
designed to ucation project formulation n strategies. s for imple- ducation ideas this resource l guidelines fic evidence a section of hese guidelines o profile a practice and hich are likely acceptance administrators. assessing the plementation ined in the be useful in n of implemen- s. While differ from uation, the ook should ective and ion of career ts into ings.	There are three research reports on hand and a draft version of the handbook is being reviewed. A decision on how to disseminate the handbook is imminent.	Fiscal year: 1972...*$211,531 1973.....**9,043 ***108,708 1974..***146,250 1975...***91,502 Total 567,034 *OE funded, including fiscal year 1971 carryover funds. **OE funded. ***NIE total $346,450	Dates 1. 1974-November 1975 2. November 1975 to present. Project officer 1. Lance Hodes 2. C. B. Crump Activities 1. 1973-74, site visits. July 1974, review of prototype by career education project directors. 2. Fall 1975, major review of draft.	The ultimate accomplishment, of course, will be the dissemination and use of the handbook. This will begin in September 1976.
velopment a d generalized mation for tion (MISVE). itself directly concern for and accounta- mproved nformation. cally designed	Preliminary versions of system documentation and applications programs (edit, load, update) for use with the generalized data base management system computer software package selected for use with MISVE were received by NIE on March 13, 1976.	Fiscal year: 1972..*$712,860 1973...**50,076 1974*** 851,542 1975. **123,380 Total 1,737,858 *OE funded, including fiscal year	Dates 1. 1973-November 1975 2. November 1975 to present. Project officer 1. Lance Hodes 2. Robert Stump	Following field testing, MISVE is intended for adaptation and operation by State departments of vocational education and school districts with extensive vocational education enrollments.

Project	Objectives and strategies	Status	Funding	Monitoring history	Accomplis
	to deal more effectively with the needs of most information system administrators who must periodically redefine information needs, update existing data bases, rapidly access stored data in a form and at a time when they are needed, and who must have options open to them for acquiring and maintaining computer software on computer hardware that are available to them.	A field trial of the system under sponsorship of USOE, Bureau of Occupational and Adult Education, will be completed by August 31, 1976.	1971 carryover funds. **OE funded. ***NIE funded. Represents 3 work units.	Activities 1. Fall 1975, major review. July 1975, site visit. 2. November 1975, site visit. December 1975, review of draft documents. February 1976, site visit.	

d strategies	Status	Funding	Monitoring history	Accomplishments
fectively with t information rators who must define informa- te existing dly access form and at are needed, e options open iring and uter software dware that are em.	A field trial of the system under sponsorship of USOE, Bureau of Occupational and Adult Education, will be completed by August 31, 1976.	1971 carryover funds. **OE funded. ***NIE funded. Represents 3 work units.	Activities 1. Fall 1975, major review. July 1975, site visit. 2. November 1975, site visit. December 1975, review of draft documents. February 1976, site visit.	

Table 5. Current non-NIE projects

Project	Objectives and strategies	Status	Funding	Accomplish
Development of Competency-Based Instructional Materials for Local Administrators of Vocational Education	The purpose of the project is to develop and field test a set of modularized training materials individualized instruction or facilitator-led group instruction. The content of the materials will be based on a nationally identified and verified list of competencies important to local vocational education administrators. To insure their transportability, two user guides will be developed to accompany the self-contained modularized packages. The materials will be field tested in at least two geographically diverse locations and revised before being disseminated.	The project which started July 1, 1975, is currently in the research phase with efforts focused upon identification and verification of administrator competencies. Project completion is scheduled for December 31, 1976.	The funding for this project has been through USOE, Vocational Education Act as amended, part 4-c research funds administered by the Research Branch, Division of Research and Demonstration, Bureau of Occupational and Adult Education. This project has been funded by a grant in the amount of $79,000. The percentage of CVE institutional funding provided for budget year 1976 by this contract is 2 percent.	Major accomplishments (1) conducting a compr of the literature and search on the local ad of vocational educatio ing a search for prese administrator competen materials, (3) conduct workshop to derive sta performed.
National Institute for Performance-Based Teacher Education	The major purpose of the project is to develop the skill of selected vocational teacher educators and decisionmakers to adapt, utilize, and evaluate performance-based vocational teacher education curriculums within their own institutions. Selected teacher educators are involved in the implementation of PBTE curricular materials which have already been developed for the purpose of improving education personnel preparation. One hundred instructional packages,	The project is currently in the testing, technical assistance, monitoring, and implementation phases. The project started July 1, 1975, and is scheduled to terminate on August 31, 1976.	This project has been funded by a grant from the U.S. Office of Education under provisions of the EPDA, part F, section 553, and the Ohio Department of Education in the amount of $125,000 for budget year 1976. The percentage of CVE institutional funding provided by this contract is 3 percent.	Major accomplishments tablishment and conveni advisory group; (2) sel participating instituti education; (3) conducti PBTE workshop for 30 si tors, and State departm education representativ ducting 10, 3-day, onsi workshops at each of th institutions; (5) condu technical-assistance si and (6) making biweekly phone calls.

Table 5. Current non-NIE projects

and strategies	Status	Funding	Accomplishments
e project is to test a set of ing materials struction or roup instruction. e materials will be ally identified of competencies l vocational trators. To insure ility, two user veloped to f-contained ges. The materials ted in at least y diverse locations e being dissemi-	The project which started July 1, 1975, is currently in the research phase with efforts focused upon identification and verification of administrator competencies. Project completion is scheduled for December 31, 1976.	The funding for this project has been through USOE, Vocational Education Act as amended, part 4-c research funds administered by the Research Branch, Division of Research and Demonstration, Bureau of Occupational and Adult Education. This project has been funded by a grant in the amount of $79,000. The percentage of CVE institutional funding provided for budget year 1976 by this contract is 2 percent.	Major accomplishments thus far include (1) conducting a comprehensive review of the literature and previous research on the local administration of vocational education, (2) conducting a search for presently available administrator competency-based materials, (3) conducting a DACUM workshop to derive statement of tasks performed.
of the project is ll of selected educators and adapt, utilize, rmance-based education their own ected teacher lved in the PBTE curricular ve already been purpose of l preparation. ctional packages.	The project is currently in the testing, technical assistance, monitoring, and implementation phases. The project started July 1, 1975, and is scheduled to terminate on August 31, 1976.	This project has been funded by a grant from the U.S. Office of Education under provisions of the EPDA, part F, section 553, and the Ohio Department of Education in the amount of $125,000 for budget year 1976. The percentage of CVE institutional funding provided by this contract is 3 percent.	Major accomplishments include (1) establishment and convening of national advisory group; (2) selection of 10 participating institutions of higher education; (3) conducting national PBTE workshop for 30 site coordinators, and State department of education representatives; (4) conducting 10, 3-day, onsite orientation workshops at each of the participating institutions; (5) conducting 2 technical-assistance site visits; and (6) making biweekly monitoring phone calls.

Project	Objectives and strategies	Status	Funding	Accomplishm
	called modules, are the primary basis for instruction. The modules, developed by CVE under a contract with NIE, are designed for use by students in both preservice and inservice vocational teacher education programs in all of the various vocational service areas.			
Student Attitudes Toward Vocational Education	The objectives of this project are to study the attitudes of disadvantaged urban youth, including the possible effects of minority-group membership on these attitudes. Specifically, (1) to collect data about the attitudes toward vocational education and employment of male, 9th-grade students in the lower socioeconomic (disadvantaged) strata; (2) to determine the basic attitude constructs of the students by analyzing the interrelationships among the specific attitude items; and (3) to relate the attitudes of the students to their choices of 10th-grade educational programs (including "dropout").	The project is in the final report stage. It is scheduled for completion March 31, 1976.	The project was funded with a grant from the U.S. Office of Education, Bureau of Occupational and Adult Education, for a total of $74,571. The percentage of CVE institutional funding provided for budget year 1975 by the grant is 2 percent.	The findings are not ye
Methods of Implementing Vocational Education Exemplary Programs in Local School Districts	The objective of this project is the discovery of new knowledge associated with the implementation and diffusion of exemplary programs in local school districts. Of special interest are those variables which can be manipulated to foster effective implementation of	This research project is in the data-collection phase. The major independent variables have been identified within a working conceptual framework. Data are being collected from vocational education exemplary projects at the present time. The project is scheduled for	This is the first non-NIE project funded in the Diffusion of Innovations program since 1972. However, the 9-year history of the program includes other institutional support	Two major products are this project: (1) A re on the influence of sel organizational and adm variables on continued use of exemplary progr al education; and (2) program demonstration

and strategies	Status	Funding	Accomplishments
are the primary ction. The modules, under a contract signed for use by preservice and onal teacher ms in all of the al service areas.			
f this project are itudes of disad- outh, including the of minority-group ese attitudes.) to collect data des toward vocation- employment of students in the mic (disadvantaged) etermine the basic cts of the students interrelationships ic attitude items; e the attitudes to their choices ucational programs out").	The project is in the final report stage. It is scheduled for completion March 31, 1976.	The project was funded with a grant from the U.S. Office of Education, Bureau of Occupational and Adult Education, for a total of $74,571. The percentage of CVE institutional funding provided for budget year 1975 by the grant is 2 percent.	The findings are not yet available.
f this project is the knowledge associ- plementation f exemplary programs districts. Of t are those variables nipulated to foster mentation of	This research project is in the data-collection phase. The major independent variables have been identified within a working conceptual framework. Data are being collected from vocational education exemplary projects at the present time. The project is scheduled for	This is the first non-NIE project funded in the Diffusion of Innovations program since 1972. However, the 9-year history of the program includes other institutional support	Two major products are planned for this project: (1) A research report on the influence of selected organizational and administrative variables on continued and extended use of exemplary programs in vocational education; and (2) an exemplary program demonstration guide.

Project	Objectives and strategies	Status	Funding	Accomplishme
	previously tested new ideas, such as staffing patterns, the use of interpersonal installation techniques, etc. Continuation of exemplary programs on site after Federal funds have been depleted and the transportability of program outputs to other school districts are the primary dependent variables in this study.	completion December 31, 1976 (project initiated July 1, 1975).	from non-NIE sources. This project has been funded by a grant from the U.S. Office of Education in the amount of $79,000. The percentage of CVE institutional funding for budget year 1976 provided by this grant is 2 percent.	
State Management Information System Needs Study	The Bureau of Occupational and Adult Education, the U.S. Office of Education, is vitally concerned with providing leadership to State and local educational agencies in improving their capacities to generate information for meeting congressional needs, for use in program planning to achieve desired vocational education goals, and for providing reports to USOE on the use and impact of Federal funds expended for vocational education have received substantial funding support through the Vocational Education Act of 1963, as amended, for the purpose of upgrading their MIS capabilities. The output of this project will be a final report to BOAE which will contain the procedures, results, and recommendations which are derived from the completed objectives of this study.	The project is ready to engage in data collection in the States and is awaiting instrument clearance in order to proceed. Project will be completed by September 30, 1976.	The project has been funded by contract with the U.S. Office of Education, Bureau of Occupational and Adult Education, for the amount of $202,560. The percentage of CVE institutional funding provided for budget year 1976 by this contract is 5 percent.	None to date.

nd strategies	Status	Funding	Accomplishments
new ideas, such as , the use of inter- tion techniques, n of exemplary after Federal funds l and the trans- gram outputs to ricts are the pri- riables in this	completion December 31, 1976 (project initiated July 1, 1975).	from non-NIE sources. This project has been funded by a grant from the U.S. Office of Education in the amount of $79,000. The percentage of CVE institutional funding for budget year 1976 provided by this grant is 2 percent.	
pational and Adult . Office of lly concerned dership to State nal agencies in pacities to on for meeting s, for use in o achieve desired on goals, and rts to USOE on of Federal funds ional education tantial funding e Vocational 963, as amended, upgrading their The output of be a final report contain the , and recommen- derived from ctives of this	The project is ready to engage in data collection in the States and is awaiting instrument clearance in order to proceed. Project will be completed by September 30, 1976.	The project has been funded by contract with the U.S. Office of Education, Bureau of Occupational and Adult Education, for the amount of $202,560. The percentage of CVE institutional funding provided for budget year 1976 by this contract is 5 percent.	None to date.

Project	Objectives and strategies	Status	Funding	Accomplishmen
A Field Trial of the Management Information System for Vocational Education (MISVE)	CVE has under development a comprehensive and generalized management information system for vocational education (MISVE). MISVE addresses itself directly to the national concern for better planning and accountability through improved utilization of information. MISVE is specifically designed to deal more effectively with the needs of most information system administrators who must periodically redefine information needs, update existing data bases, access stored data in a form and at a time when they are needed, and who must have options open to them for acquiring and maintaining computer software on computer hardware that are available to them.	Field trial activities are in operation in the State of Colorado. Project will be completed by August 31, 1976.	In 1972 USOE transferred the project to NIE. From 1972 to March 31, 1976, NIE funded MISVE development. From May 1, 1973, to August 1976, the U.S. Office of Education, Bureau of Adult Education, funded the field trial. The current Office of Education/BOAE contract is in the amount of $123,380. The percentage of CVE institutional funding provided for budget year 1975 for this contract is 3 percent.	Major accomplishments (1) six documents requ implement and operate (2) nine applications (edit, load, update).
A Comprehensive Career Guidance, Counseling, Placement, and Follow Through System for Rural Schools (K-14)	The major objective of the Rural Career Guidance project is to develop a comprehensive career guidance, counseling, placement, and followthrough system for rural schools (K-14) to meet the unique program development needs of the rural educators who in turn will be able to address the unique career development needs of rural youth and adults. The system will include 15 separate documents for rural guidance orientation, program process	The project is in the 11th month. It began July 1, 1975, and will close December 31, 1976. All technical specifications for product development and eight program documents have been completed.	The project has been funded from the USOE, the University of Wisconsin, and the Northern Michigan University in the amount of $213,823.	This tristate consort accomplishments will (1) Orientation Docum Career Guidance Progr (3) Rural Career Guid Strategy Documents, (National Inservice Wo

nd strategies	Status	Funding	Accomplishments
velopment a d generalized manag- n system for tion (MISVE). itself directly concern for and accountability utilization of SVE is specifically more effectively f most information ators who must efine information isting data bases, ta in a form and hey are needed, e options open iring and main- software on e that are available	Field trial activities are in operation in the State of Colorado. Project will be completed by August 31, 1976.	In 1972 USOE transferred the project to NIE. From 1972 to March 31, 1976, NIE funded MISVE development. From May 1, 1973, to August 1976, the U.S. Office of Education, Bureau of Adult Education, funded the field trial. The current Office of Education/BOAE contract is in the amount of $123,380. The percentage of CVE institutional funding provided for budget year 1975 for this contract is 3 percent.	Major accomplishments include (1) six documents required to implement and operate MISVE, and (2) nine applications programs (edit, load, update).
tive of the Rural project is to hensive career eling, placement, h system for K-14) to meet the Development needs cators who in le to address er development youth and adults. include 15 separate ural guidance ogram process	The project is in the 11th month. It began July 1, 1975, and will close December 31, 1976. All technical specifications for product development and eight program documents have been completed.	The project has been funded from the USOE, the University of Wisconsin, and the Northern Michigan University in the amount of $213,823.	This tristate consortium's major accomplishments will include (1) Orientation Documents, (2) Rural Career Guidance Program Documents, (3) Rural Career Guidance Delivery Strategy Documents, (4) State and National Inservice Workshops.

Project	Objectives and strategies	Status	Funding	Accomplish
	development, and program delivery strategies. To establish rural-user credibility, each document will be reviewed by panels of 120 rural-based lay people, students, and educators in the States of Ohio, Wisconsin, and Michigan and their recommended revisions will be incorporated.			
A National Needs Assessment of Career Guidance	The purpose of the study is to conduct a national needs assessment of career guidance, K through adult, with particular emphasis on reviewing national progress in the establishment of comprehensive career guidance programs. This is to be accomplished through a review of the progress in establishing comprehensive career guidance plans in the 50 States and Washington, D.C., and a review of the 38 guidance projects funded under the part C of the Vocational Education Act, as amended. The information obtained will be used to develop a profile of exemplary comprehensive career guidance programs and a list of priority needs for research and development for comprehensive career guidance programs.	The project began July 1, 1975, and is scheduled for completion on September 30, 1976.	The source of funding is a contract from the U.S. Office of Education, Bureau of Occupational and Adult Education, in the amount of $225,440. The percentage of CVE institutional funding provided for budget year 1976 by this contract is 5 percent.	The projected outcomes matrix delineating the of a comprehensive car program; (2) a review in establishing compreh guidance plans in the and Wasington, D.C.; (of the 38 USOE part C projects; (4) a list o comprehensive career gu grams, reviewed on the criteria established wi of an expert panel; and of priority needs for and development for com career guidance program The final report will of the five major outpu

and strategies	Status	Funding	Accomplishments
nd program delivery o establish rural- ty, each document will panels of 120 rural- le, students, and he States of Ohio, Michigan and their isions will be			
the study is to nal needs assessment nce, K through adult, emphasis on review- ogress in the f comprehensive programs. This is ned through a rogress in establish- ve career guidance States and ., and a review of projects funded C of the Vocational as amended. The ained will be used ofile of exemplary areer guidance list of priority rch and development e career guidance	The project began July 1, 1975, and is scheduled for completion on September 30, 1976.	The source of funding is a contract from the U.S. Office of Education, Bureau of Occupational and Adult Education, in the amount of $225,440. The percentage of CVE institutional funding provided for budget year 1976 by this contract is 5 percent.	The projected outcomes are (1) a matrix delineating the components of a comprehensive career guidance program; (2) a review of the progress in establishing comprehensive career guidance plans in the 50 States and Wasington, D.C.; (3) a review of the 38 USOE part C funded guidance projects; (4) a list of exemplary comprehensive career guidance programs, reviewed on the basis of criteria established with the help of an expert panel; and (5) a list of priority needs for research and development for comprehensive career guidance programs. The final report will describe all of the five major outputs.

Table 6. Special projects

Project	Objectives and strategies	Status	Funding	Accomplishments
Mini Conference to Achieve Consensus of Scope and Sequence for Career Education (K-12)	CVE is managing a series of miniconferences (in direct coordination with Dr. Kenneth Hoyt) for selected persons interested and knowledgeable of career education. The objective of the project is to arrive at a consensus of scope and sequence for career education (K-12).	Twenty-two of twenty-six scheduled miniconferences have been completed. The project commenced on July 1, 1975, and is scheduled for completion on June 30, 1975.	The project is funded by a grant from the U.S. Office of Education, Career Education Division, in the amount of $169,302. The percentage of center institutional funding provided for budget year 1976 by this grant is 4 percent.	Ultimately, a documented acceptable consensus of sequence for career educ will be available for di to persons and agencies in career education and implementation.
Model Secondary School for the Deaf	The objective of this effort is to adapt career education curriculum for the impaired of hearing and to prepare staff for implementing the curriculum.	The project involves the adaptation of curriculum units in career education for use by deaf students, inservicing of classroom teachers to use the curriculum with students, and orientation of administrators and guidance personnel to career education. Completion is scheduled for August 31, 1976.	The total project has been funded from the U.S. Office of Education, Bureau of Education for the Handicapped, through NCEMMH in the amount of $193,017, and Gallaudet College for $49,735. The percentage of CVE institutional funding provided for budget year 1975 by this contract is 4 percent. The percentage of CVE institutional funding provided for budget year 1976 by this contract is 1 percent.	Accomplishments to date (1) 13 career education units in place at the secondary school and app selected staff trained t curriculum, (2) the adap a career planning system an elementary school st to career education in t Model School.

Table 6. Special projects

nd strategies	Status	Funding	Accomplishments
a series of mini- direct coordination Hoyt) for selected ed and knowledgeable ion. The objective s to arrive at a pe and sequence for (K-12).	Twenty-two of twenty-six scheduled miniconferences have been completed. The project commenced on July 1, 1975, and is scheduled for completion on June 30, 1975.	The project is funded by a grant from the U.S. Office of Education, Career Education Division, in the amount of $169,302. The percentage of center institutional funding provided for budget year 1976 by this grant is 4 percent.	Ultimately, a documented generalized acceptable consensus of scope and sequence for career education (K-12) will be available for dissemination to persons and agencies interested in career education and its implementation.
this effort is education curricu- ired of hearing staff for implement- um.	The project involves the adaptation of curriculum units in career education for use by deaf students, inservicing of classroom teachers to use the curriculum with students, and orientation of administrators and guidance personnel to career education. Completion is scheduled for August 31, 1976.	The total project has been funded from the U.S. Office of Education, Bureau of Education for the Handicapped, through NCEMMH in the amount of $193,017, and Gallaudet College for $49,735. The percentage of CVE institutional funding provided for budget year 1975 by this contract is 4 percent. The percentage of CVE institutional funding provided for budget year 1976 by this contract is 1 percent.	Accomplishments to date include (1) 13 career education curriculum units in place at the model secondary school and appropriately selected staff trained to use the curriculum, (2) the adaptation of a career planning system, and (3) an elementary school staff oriented to career education in the Kendall Model School.

Project	Objectives and strategies	Status	Funding	Accomplis
The Alliance for Career Education	Six local education agencies have bound themselves together and contracted with CVE. The objective of the project encompasses (1) development of four career education program segments and (2) inservice training of district staff to implement the program segments. The segments include reading (1-13), occupational exploration (7-10), mathematics (9-12), and a career planning system (6-10).	The project is in its second full year of operation. The Alliance effort commenced on February 1, 1974, and is presently funded through June 30, 1976.	All funds come to CVE from contracts with local districts. Total funding over the last 2¼ years has been $417,572 (budget year 1974 was $95,879, budget year 1975 was $157,105, and budget year 1976 was $164,588). The percentage of CVE institutional funding provided by the contracts in budget year 1974 was 3 percent, in budget year 1975 was 4 percent, and in budget year 1976 was 4 percent.	Development and imple the four program segm six-member school dis consortium, in varyin been accomplished to
Personnel Development with Emphasis on Business and Industry	The objective of the project is to make vocational educators aware of personnel development and occupational preparation program strategies used in business and industry. The vehicle for accomplishing the objective is a national seminar for vocational educators and selected representatives from business and industry.	The national seminar was conducted. This project, which commenced on July 1, 1975, and scheduled for completion on March 31, 1976, is now completed.	The project was funded by a U.S. Office of Education grant to the Ohio Department of Education and subcontracted to CVE for funding in the amount of $33,000. The percentage of CVE institutional funding provided for budget year 1976 by this contract is less than 1 percent.	Vocational educators and industry have bee together in the explo mutual ways in which utilize the experience and programs of the o paring and training p employees for specifi

nd strategies	Status	Funding	Accomplishments
ion agencies have together and CVE. The objective ncompasses (1) dev- career education and (2) inservice rict staff to ogram segments. lude reading (1-13), loration (7-10), 2), and a career (6-10).	The project is in its second full year of operation. The Alliance effort commenced on February 1, 1974, and is presently funded through June 30, 1976.	All funds come to CVE from contracts with local districts. Total funding over the last 2¼ years has been $417,572 (budget year 1974 was $95,879, budget year 1975 was $157,105, and budget year 1976 was $164,588). The percentage of CVE institutional funding provided by the contracts in budget year 1974 was 3 percent, in budget year 1975 was 4 percent, and in budget year 1976 was 4 percent.	Development and implementation of the four program segments in the six-member school districts of the consortium, in varying degrees, has been accomplished to date.
the project is al educators aware elopment and paration program in business and ehicle for objective is a for vocational lected repre- business and	The national seminar was conducted. This project, which commenced on July 1, 1975, and scheduled for completion on March 31, 1976, is now completed.	The project was funded by a U.S. Office of Education grant to the Ohio Department of Education and subcontracted to CVE for funding in the amount of $33,000. The percentage of CVE institutional funding provided for budget year 1976 by this contract is less than 1 percent.	Vocational educators and business and industry have been brought closer together in the exploration of mutual ways in which each might utilize the experiences, strategies, and programs of the other in preparing and training potential employees for specific occupations.

Project	Objectives and strategies	Status	Funding	Accomplishmen
Personnel Development of Vocational Education Directors of Large Cities	The objectives of this leadership effort are (1) to conduct a survey of selected large city vocational education programs to identify major problem areas; and (2) to conduct a national seminar of large-city vocational education program directors to review, discuss, and explore potential next steps for solving the identified problems.	The project commenced on July 1, 1975, and is scheduled for completion by June 30, 1976.	The project was funded by a U.S. Office of Education grant to the Ohio Department of Education and subcontracted to CVE for funding in the amount of $55,000. The percentage of CVE institutional funding provided for budget year 1976 by this contract is 1 percent.	Vocational education pro in selected large citie potential alternatives solutions have been ide The final report will c survey accomplishments, ceedings of the seminar discussion of potential solutions to the identi
American Vocational Association (AVA) Presession Research Seminars	This leadership development project's objective is to provide instruction for vocational education researchers in current strategies, methodology, and techniques, as these relate to vocational education programmatic research and development. These sessions were five in number and were held just prior to the national AVA conference.	The project commenced July 1, 1975, and was scheduled for completion on May 31, 1976.	The project was funded by a U.S. Office of Education grant to the Ohio Department of Education and subcontracted to CVE for funding in the amount of $20,000. The percentage of CVE institutional funding provided for budget year 1976 by this contract is less than 1 percent.	Eighty-five local and S tional educators receiv in new methodology, tec uses of research result tional education resear
State Directors of Vocational Education Seminar	The objective of the seminar was to provide an opportunity for State directors of vocational education and their selected staffs to discuss, share, and explore mutual programmatic problems and alternative solutions for	The project commenced August 1, 1975, and was scheduled for completion on March 31, 1976. The seminar was conducted and the proceedings have been written.	The project was funded by a U.S. Office of Education grant to the Ohio State Department of Education and subcontracted to CVE for	One hundred and five p pated in the 5-day con senting the following SEA Administrators, 60 staff, 21; local distr tors and others, 24.

es and strategies	Status	Funding	Accomplishments
of this leadership to conduct a survey rge city vocational rams to identify reas; and (2) to nal seminar of tional education rs to review, plore potential solving the lems.	The project commenced on July 1, 1975, and is scheduled for completion by June 30, 1976.	The project was funded by a U.S. Office of Education grant to the Ohio Department of Education and subcontracted to CVE for funding in the amount of $55,000. The percentage of CVE institutional funding provided for budget year 1976 by this contract is 1 percent.	Vocational education program problems in selected large cities and some potential alternatives for their solutions have been identified. The final report will contain the survey accomplishments, the proceedings of the seminar, and a discussion of potential alternative solutions to the identified problems.
development proj- is to provide vocational education current strategies, techniques, as vocational education earch and devel- essions were five re held just prior AVA conference.	The project commenced July 1, 1975, and was scheduled for completion on May 31, 1976.	The project was funded by a U.S. Office of Education grant to the Ohio Department of Education and subcontracted to CVE for funding in the amount of $20,000. The percentage of CVE institutional funding provided for budget year 1976 by this contract is less than 1 percent.	Eighty-five local and State vocational educators received instruction in new methodology, techniques, and uses of research results in vocational education research activity.
the seminar was portunity for of vocational eir selected , share, and rogrammatic problems olutions for	The project commenced August 1, 1975, and was scheduled for completion on March 31, 1976. The seminar was conducted and the proceedings have been written.	The project was funded by a U.S. Office of Education grant to the Ohio State Department of Education and subcontracted to CVE for	One hundred and five persons participated in the 5-day conference representing the following categories: SEA Administrators, 60; USOE/BOAE staff, 21; local district administrators and others, 24.

Project	Objectives and strategies	Status	Funding	Accomplishmen
	State vocational education problems.		funding in the amount of $27,000. The percentage of CVE institutional funding provided for budget year 1976 by this subcontract is less than 1 percent.	
Technical Systems Incorporated	The objective of this project is to revise a junior high school level laboratory manual for the instruction of electronics, mechanics, and fluidics for a commercial instructional materials supplier.	Completion of the project is scheduled for April 30, 1976. The project commenced on January 1, 1976.	This project was funded by a Technical Systems Inc. contract in the amount of $13,765. The percentage of CVE institutional funding provided for budget year 1976 by this contract is less than 1 percent.	Three revised laboratory be prepared for publicat marketing.
Bureau of Indian Affairs, California-Madera Training Center	The project has as its objective to develop, test, and implement prevocational training courses to Xerox and NCR troubleshooting service training programs in electronics, mechanics, and fluidics for American Indian postsecondary students from across the Nation to be trained at the Madera, Calif., Training Center.	The project, which began on April 24, 1975, will be completed April 30, 1976.	This project was done in two phases overlapping fiscal years 1975 and 1976. The project was funded by contract from the Bureau of Indian Affairs in the amount of $143,999. The percentage of CVE institutional funding provided for budget year 1975 by this contract is 3 percent.	Three prevocational cour developed, tested, and i at the Madera Training C American Indian postseco students in preparation service training with Xe National Cash Register c

and strategies	Status	Funding	Accomplishments
education pro-		funding in the amount of $27,000. The percentage of CVE institutional funding provided for budget year 1976 by this subcontract is less than 1 percent.	
this project is to high school level l for the instruc- ics, mechanics, a commercial terials supplier.	Completion of the project is scheduled for April 30, 1976. The project commenced on January 1, 1976.	This project was funded by a Technical Systems Inc. contract in the amount of $13,765. The percentage of CVE institutional funding provided for budget year 1976 by this contract is less than 1 percent.	Three revised laboratory manuals will be prepared for publication and marketing.
as its objective , and implement aining courses to oubleshooting programs in hanics, and rican Indian udents from across trained at the Training Center.	The project, which began on April 24, 1975, will be completed April 30, 1976.	This project was done in two phases overlapping fiscal years 1975 and 1976. The project was funded by contract from the Bureau of Indian Affairs in the amount of $143,999. The percentage of CVE institutional funding provided for budget year 1975 by this contract is 3 percent.	Three prevocational courses were developed, tested, and implemented at the Madera Training Center for American Indian postsecondary students in preparation for service training with Xerox and National Cash Register companies.

Project	Objectives and strategies	Status	Funding	Accomplishments
National Joint Apprenticeship Committee for Painting, Decorating, and Drywall Installation	The objective of this project with the national contractors/labor union organizations include (1) developing seven apprenticeship training capsule courses for the national joint committee, and (2) conducting six instructor training seminars for the national joint committee.	The project commenced January 10, 1975, and is scheduled for completion on December 31, 1976.	The project is beginning its second year with a supplemental contract which was effective February 1, 1976. The project was funded by contract with the national joint committee for funding in the amount of $160,944 (budget year 1975, $121,765; budget year 1976, $39,179). The percentage of CVE institutional funding provided for budget year 1975 by this contract is 3 percent (budget year 1976, less than 1 percent).	The major accomplishment project are (1) the devel seven apprenticeship tra courses to be used natio and (2) the training of apprenticeship instructo techniques for using the curriculum with apprenti the nation.
Workshop for Local Directors of Vocational Education on Program Evaluation for the State of Vermont	The objective of this effort is to hold a 3-day training seminar for local directors of vocational education on methods and techniques for evaluating local vocational education programs.	The project commenced on September 2, 1975, and is scheduled for completion on June 30, 1976.	The project was funded by contract with the State of Vermont for funding in the amount of $3,879. The percentage of CVE institutional funding provided for budget year 1976 by this contract is less than 1 percent.	Thirty selected staff me the State of Vermont Dep Education, Division of Education, participated workshop. The emphasis shop was on strategies for evaluating ongoing education programs in lo districts from a State- of view.

nd strategies	Status	Funding	Accomplishments
this project with tractors/labor ions include (1) de- pprenticeship courses for the ommittee, and ix instructor s for the ommittee.	The project commenced January 10, 1975, and is scheduled for completion on December 31, 1976.	The project is beginning its second year with a supplemental contract which was effective February 1, 1976. The project was funded by contract with the national joint committee for funding in the amount of $160,944 (budget year 1975, $121,765; budget year 1976, $39,179). The percentage of CVE institutional funding provided for budget year 1975 by this contract is 3 percent (budget year 1976, less than 1 percent).	The major accomplishments of this project are (1) the development of seven apprenticeship training courses to be used nationally, and (2) the training of selected apprenticeship instructors in techniques for using the new curriculum with apprentices across the nation.
this effort is to ining seminar for of vocational hods and valuating local tion programs.	The project commenced on September 2, 1975, and is scheduled for completion on June 30, 1976.	The project was funded by contract with the State of Vermont for funding in the amount of $3,879. The percentage of CVE institutional funding provided for budget year 1976 by this contract is less than 1 percent.	Thirty selected staff members from the State of Vermont Department of Education, Division of Vocational Education, participated in the 3-day workshop. The emphasis of the workshop was on strategies and methodology for evaluating ongoing vocational education programs in local school districts from a State-level point of view.

Table 7. Personnel development

Project	Objectives and strategies	Status	Funding	Accomplishme
National Training Fund/University Center (NTF/UC) for the Sheet-metal and Air-Conditioning Industry	After screening the capabilities of the Nation's major universities, the national training fund for the sheet-metal and air-conditioning industry (NTF) trustees selected CVE in 1973 to operate their NTF university center. The NTF/UC is regarded as an innovative concept involving the resources of a major university-based center with industry management and union organizations in a cooperative effort to improve and extend training programs for the sheet-metal and air-conditioning industry.	All services and products have been delivered with the exception of ongoing training programs for instructors. The current contracted scope of work is to be completed by July 1978.	The project was funded by contracts with the NTF in the total amount of $1,741,749 (budget year 1973, $61,065; budget year 1974, $349,763; budget year 1975, $442,466; budget year 1976, $888,455). Budget year 1976 is a continuation project under a current 30-month contract that is renewable in July 1978. The percentage of CVE institutional funding provided by the contract in budget year 1973 was less than 1 percent; budget year 1974, 10 percent; budget year 1975, 10 percent, and budget year 1976, 21 percent.	The major accomplishment completion of approximat instructor training prog several regional worksho industry training survey development of a thesaur assembly of a library.
Cooperative Adult Career Education Project	This project was designed to identify, study, and disseminate information about jointly sponsored programs for adults. Activities of interest were those programs that were common efforts of both business or industry and the State department of education or its designates such as a public school or community college. Program participants were adults	This project has been completed.	This project was sponsored by the U.S. Office of Education, Bureau of Occupational and Adult Education, in the amount of $150,529 for the period July 1, 1974, through December 31, 1975. The percentage of CVE institutional funding provided	Defined and described coo adult career education pr activities. Identified c cooperative adult educati Those are presented in th Partial Listing of Cooper Adult Education Programs. cooperative programs. In and data are reported in Abstracts of Selected Coo Education Programs and Ca

Table 7. Personnel development

nd strategies	Status	Funding	Accomplishments
he capabilities of r universities, ning fund for the ir-conditioning ustees selected erate their NTF . The NTF/UC innovative concept ources of a major center with nt and union a cooperative and extend for the sheet- ditioning industry.	All services and products have been delivered with the exception of ongoing training programs for instructors. The current contracted scope of work is to be completed by July 1978.	The project was funded by contracts with the NTF in the total amount of $1,741,749 (budget year 1973, $61,065; budget year 1974, $349,763; budget year 1975, $442,466; budget year 1976, $888,455). Budget year 1976 is a continuation project under a current 30-month contract that is renewable in July 1978. The percentage of CVE institutional funding provided by the contract in budget year 1973 was less than 1 percent; budget year 1974, 10 percent; budget year 1975, 10 percent, and budget year 1976, 21 percent.	The major accomplishments include completion of approximately 20 instructor training programs, several regional workshops, numerous industry training surveys, the development of a thesaurus, and assembly of a library.
designed to and disseminate t jointly spon- or adults. Activ- t were those re common efforts or industry and ment of education s such as a community college. ants were adults	This project has been completed.	This project was sponsored by the U.S. Office of Education, Bureau of Occupational and Adult Education, in the amount of $150,529 for the period July 1, 1974, through December 31, 1975. The percentage of CVE institutional funding provided	Defined and described cooperative adult career education program activities. Identified ongoing cooperative adult education programs. Those are presented in the report, Partial Listing of Cooperative Adult Education Programs. Studied cooperative programs. Information and data are reported in two reports, Abstracts of Selected Cooperative Education Programs and Case Studies

Project	Objectives and strategies	Status	Funding	Accomplis
	with less than a high school education. Programs of interest included those activities related to adult basic education (reading, writing, and computation), preparation for the General Education Development (GED) Test, high school completion, and job-related training.		for budget year 1975 by this contract is 3 percent.	*of Selected Cooperativ* *Education Programs*. field tested a set of *for the Development an* *Cooperative Adult Educ* Reported on the issue cooperative adult educ in *Discussion of Indus* *Cooperation for Adult* Disseminated the proje to identified target
The Development of Entrepreneurs Through Vocational Education	The purpose of this project was to develop a course of instruction on entrepreneurship for infusion into ongoing vocational education programs at the postsecondary level, and to conduct an inservice workshop for selected postsecondary vocational instructors in Ohio.	This project has been completed. All products and services were delivered to the sponsor.	This project was sponsored by the Division of Vocational Education, Department of Education, the State of Ohio, and funded through the Ohio EPDA allocation for $31,971. The duration of the project was from May 1, 1975, to August 31, 1975. The percentage of CVE institutional funding provided for budget year 1975 by this contract was less than 1 percent.	Developed a prototypic performance-based cour tion for 40 hours enti "Instruction to Entrep Conducted a 3-week tea workshop for 11 vocati tors from 7 postsecond in Ohio.

and strategies	Status	Funding	Accomplishments
a high school grams of interest activities related education (reading, mputation), the General opment (GED) ol completion, and ining.		for budget year 1975 by this contract is 3 percent.	*of Selected Cooperative Adult Education Programs*. Prepared and field tested a set of *Guidelines for the Development and Study of Cooperative Adult Education Programs*. Reported on the issues related to cooperative adult education programs in *Discussion of Industry-Education Cooperation for Adult Learning*. Disseminated the project products to identified target audiences.
this project was to e of instruction ship for infusion cational education postsecondary onduct an inservice lected postsecondary ructors in Ohio.	This project has been completed. All products and services were delivered to the sponsor.	This project was sponsored by the Division of Vocational Education, Department of Education, the State of Ohio, and funded through the Ohio EPDA allocation for $31,971. The duration of the project was from May 1, 1975, to August 31, 1975. The percentage of CVE institutional funding provided for budget year 1975 by this contract was less than 1 percent.	Developed a prototypic, modularized, performance-based course of instruction for 40 hours entitled "Instruction to Entrepreneurship." Conducted a 3-week teacher-training workshop for 11 vocational instructors from 7 postsecondary schools in Ohio.

Project	Objectives and strategies	Status	Funding	Accomplishmen
The Improvement of Occupational Education in the Federal Bureau of Prisons	The Federal Bureau of Prisons (FBP), U.S. Department of Justice, has awarded a contract to CVE to assess the comparative effectiveness of various delivery systems for occupational education programs and to provide appropriate staff developemnt experiences for FBP educational personnel.	The project began June 15, 1975, and will conclude June 30, 1976.	The project was funded by contract with the Federal Bureau of Prisons in the amount of $98,000. The percentage of CVE institutional funding provided for budget year 1975 by this contract is 2 percent.	A comprehensive report p findings and recommendat concerning the delivery for improving occupation in the FBP. A staff dev program has bean develop ready to be conducted in regions for FBP educatio administrators and teach
Workshop for Improving Vocational Education in Correctional Institutions	The Bureau of Occupational and Adult Education of the U. S. Office of Education awarded the Center for Vocational Education a grant to conduct a workshop for improving vocational education in correctional institutions.	Completed.	Project dates were from July 1, 1975, to January 31, 1976. The project was funded in the amount of $42,000. The percentage of CVE institutional funding provided for budget year 1976 by this grant was less than 1 percent.	A 5-day workshop for 71 and a final report with action and recommendatio
Evaluative Planning Research Project in Vocational Education for the Massachusetts Department of Corrections	The Massachusetts Department of Corrections in cooperation with the division of occupational education of the State department of education has awarded a contract to CVE to develop a viable plan for the continued development and enhancement of vocational education for the adult population within the Massachusetts Department of Corrections.	Phase I (assessment) is about concluded and phase II (planning) is just beginning. The project commenced November 4, 1975, and is scheduled for completion on August 31, 1976.	The project was funded by contracts with the State of Massachusetts in the total amount of $79,990. The percentage of CVE institutional funding provided for budget year 1976 by this contract is 2 percent.	Phase I events and miles have been completed and report will be submitted schedule (May 5, 1976). is progressing ahead of

d strategies	Status	Funding	Accomplishments
au of Prisons rtment of Justice, ntract to CVE mparative ' various delivery pational ms and to provide f developemnt FBP educational	The project began June 15, 1975, and will conclude June 30, 1976.	The project was funded by contract with the Federal Bureau of Prisons in the amount of $98,000. The percentage of CVE institutional funding provided for budget year 1975 by this contract is 2 percent.	A comprehensive report provides findings and recommendations concerning the delivery system for improving occupational education in the FBP. A staff development program has been developed and is ready to be conducted in five regions for FBP educational administrators and teachers.
cupational and of the U. S. Office rded the Center ducation a grant kshop for improv- ducation in titutions.	Completed.	Project dates were from July 1, 1975, to January 31, 1976. The project was funded in the amount of $42,000. The percentage of CVE institutional funding provided for budget year 1976 by this grant was less than 1 percent.	A 5-day workshop for 71 people, and a final report with a plan of action and recommendations.
s Department of ooperation with occupational State department awarded a contract p a viable plan d development of vocational e adult population chusetts Depart- ons.	Phase I (assessment) is about concluded and phase II (planning) is just beginning. The project commenced November 4, 1975, and is scheduled for completion on August 31, 1976.	The project was funded by contracts with the State of Massachusetts in the total amount of $79,990. The percentage of CVE institutional funding provided for budget year 1976 by this contract is 2 percent.	Phase I events and milestones have been completed and the final report will be submitted on schedule (May 5, 1976). Phase II is progressing ahead of schedule.

Table 8. Evaluation

Project	Objectives and strategies	Status	Funding	Accomplishmen
An Evaluation of Four Tests for the J. C. Penney Home Appliance Repair Training Program	The purpose of this project was to examine four tests for the J. C. Penney Home Appliance Repair Training program. These tests included (1) basic refrigeration, (2) refrigeration diagnosis, (3) electrical troubleshooting, and (4) basic gas combustion. Each of these four tests consists of approximately 10 items. This examination and analysis was conducted so that J. C. Penney Co. could identify problems in their employee selection and training program for home appliance repair personnel.	The project commenced February 1, 1975, and was completed March 5, 1976.	This is the second phase of a project for J. C. Penney. The first phase was conducted in 1975. The first phase was contracted for $2,854 and the second phase for $2,999. The percentage of CVE institutional funding for budget year 1975 and budget year 1976 provided by these contracts is less than 1 percent.	A final report (confiden provided. This report w An Evaluation of Four Te J. C. Penney Home Applia Training Program. This includes psychometric da to reliability and item and panel review informa to validity. Data was c from over 400 employees the 4 tests.
The Development and Pilot Testing of Self-Review Instruments for Vocational Education in Kentucky	The purpose of this project is to create, try out, and revise a set of self-review instruments. These instruments will then be used by advisory councils, at the regional and local levels in Kentucky, to evaluate local vocational education programs.	The project commenced August 1, 1975, and is scheduled for completion on May 31, 1976.	The project was funded by contract with the State of Kentucky in the amount of $15,190. The percentage of CVE institutional funding provided for budget year 1976 by this contract is less than 1 percent.	A preliminary survey ins developed to determine t Kentucky's vocational ed programs which are most and least difficult for committees to evaluate. Organizational Manual an prototype Interview Guid interviewing vocational teachers, and local empl been developed.
An Evaluation of the Resource Development Unit of the Kentucky Bureau of Vocational Education	The purpose of this study is to conduct an impact evaluation of the resource development unit (RDU) of the Kentucky Bureau of Vocational Education.	The project commenced September 1, 1975, and is scheduled for completion on June 30, 1976. The project is currently in its data-collection phase.	The project was funded by contract with the State of Kentucky in the amount of $17,000. The percentage of CVE institutional funding	Several on-site visits t have been completed. A tion scheme for categori 61 RDU-funded research a ment projects was sugges developed. At this time

Table 8. Evaluation

nd strategies	Status	Funding	Accomplishments
his project was to ts for the J. C. liance Repair . These tests ic refrigeration, n diagnosis, roubleshooting, s combustion. ur tests consists 10 items. This analysis was t J. C. Penney Co. roblems in their on and training appliance repair	The project commenced February 1, 1975, and was completed March 5, 1976.	This is the second phase of a project for J. C. Penney. The first phase was conducted in 1975. The first phase was contracted for $2,854 and the second phase for $2,999. The percentage of CVE institutional funding for budget year 1975 and budget year 1976 provided by these contracts is less than 1 percent.	A final report (confidential) was provided. This report was entitled An Evaluation of Four Tests for the J. C. Penney Home Appliance Repair Training Program. This report includes psychometric data related to reliability and item analyses and panel review information related to validity. Data was collected from over 400 employees for each of the 4 tests.
his project is to and revise a set nstruments. These then be used by s, at the regional in Kentucky, to ocational education	The project commenced August 1, 1975, and is scheduled for completion on May 31, 1976.	The project was funded by contract with the State of Kentucky in the amount of $15,190. The percentage of CVE institutional funding provided for budget year 1976 by this contract is less than 1 percent.	A preliminary survey instrument was developed to determine the aspects of Kentucky's vocational education programs which are most important and least difficult for advisory committees to evaluate. A prototype Organizational Manual and three prototype Interview Guides for interviewing vocational students, teachers, and local employers have been developed.
his study is to t evaluation of elopment unit tucky Bureau of tion.	The project commenced September 1, 1975, and is scheduled for completion on June 30, 1976. The project is currently in its data-collection phase.	The project was funded by contract with the State of Kentucky in the amount of $17,000. The percentage of CVE institutional funding	Several on-site visits to the RDU have been completed. A classification scheme for categorizing the 61 RDU-funded research and development projects was suggested and developed. At this time two separate

Project	Objectives and strategies	Status	Funding	Accomplishm
			provided for budget year 1976 by this contract is less than 1 percent.	questionnaires were dev help assess the impact activities.
Evaluation of Ashland-West Holmes County Joint Vocational School Career Motivation Project by 1976	Ashland-West Holmes County Joint Vocational School is involved in a title III category career motivation project intending to involve 126 elementary school teachers (K-6) in integrating career education into their regular curriculum. These teachers are responsible for integrating career education into their regular curriculum and using and evaluating, where possible, a "Career Motivation Handbook" developed during the first year of the project (fiscal year 1975). CVE's role as a third-party evaluator is directed at aiding the Ashland project staff to improve their program strategies and become more responsible for evaluating and determining if the program meets its stated objectives.	The project commenced August 1, 1974, and is scheduled for completion on June 7, 1976.	This project has been funded by contracts with the Ashland-West Holmes County Joint Vocational School totaling $9,470. The percentage of CVE institutional funding provided for budget year 1975 and budget year 1976 by the total $9,470 in these contracts is less than 1 percent.	Data collection for the year of this project ha completed.
Evaluation of Methods and Techniques for Implementing a Comprehensive Career Education Model in Maine	The University of Maine will be provided technical assistance for their Office of Education funded career education project in the following areas: (1) Appropriateness of the research design, (2) instrument selection, (3) design of data-gathering procedures, (4) review of	This project commenced August 1, 1975, and is scheduled for completion by June 30, 1976.	This project is funded by contract with the University of Maine in the amount of $3,500. The percentage of CVE institutional funding provided for budget year 1976 by	Interim and final report be prepared for the Univ Maine.

ves and strategies	Status	Funding	Accomplishments
		provided for budget year 1976 by this contract is less than 1 percent.	questionnaires were developed to help assess the impact of RDU activities.
Holmes County Joint hool is involved in a egory career motivation ding to involve 126 hool teachers (K-6) g career education into curriculum. These responsible for areer education into curriculum and using g, where possible, a ation Handbook" devel- he first year of the al year 1975). CVE's rd-party evaluator t aiding the Ashland to improve their egies and become more or evaluating and f the program meets jectives.	The project commenced August 1, 1974, and is scheduled for completion on June 7, 1976.	This project has been funded by contracts with the Ashland-West Holmes County Joint Vocational School totaling $9,470. The percentage of CVE institutional funding provided for budget year 1975 and budget year 1976 by the total $9,470 in these contracts is less than 1 percent.	Data collection for the second year of this project has not been completed.
y of Maine will be nical assistance for of Education funded ion project in the fol- (1) Appropriateness ch design, (2) instru- n, (3) design of data- cedures, (4) review of	This project commenced August 1, 1975, and is scheduled for completion by June 30, 1976.	This project is funded by contract with the University of Maine in the amount of $3,500. The percentage of CVE institutional funding provided for budget year 1976 by	Interim and final reports will be prepared for the University of Maine.

Project	Objectives and strategies	Status	Funding	Accomplishment
	project activities, (5) revision advice, (6) technical advice and report preparation, and (7) suggestions for dissemination of project findings. This project is designed to enable the University of Maine to conduct a more meaningful career education project.		this contract is less than 1 percent.	
Improved Reading and Language Skills Through Authorships, Mansfield City Schools, Mansfield, Ohio	This project supplements the regular reading and language arts programs in half of four first- and second-grade classrooms in five elementary schools in Mansfield City schools. The supplementary treatment involves 60 nonpaid teacher aides who ask the pupils to tell them a story which is recorded. The stories are then lightly edited and typed by the teacher aides. After the stories are returned, the pupils are invited to share them. The role CVE has played in this project includes helping the Mansfield staff write the program objectives, select the evaluation design, write the instrumentation and guidelines, analyze the data, and write the interim and final evaluation reports.	The project started July 1, 1975, and is scheduled for completion by June 30, 1976. It is approximately two-thirds completed.	This project is funded by contract with the Mansfield city schools in the amount of $5,000. The percentage of CVE institutional funding provided for budget year 1976 by this contract is less than 1 percent.	The following are thc plishments for this p (1) Approximately 3,500 been typed and shared wi students; (2) several st been printed and placed the libraries in the Man elementary schools; (3) that have been analyzed the treatment groups are their skills on the appr objectives more rapidly control groups.

nd strategies	Status	Funding	Accomplishments
es, (5) revision nical advice and on, and (7) sug- semination of project project is designed iversity of Maine meaningful project.		this contract is less than 1 percent.	
elements the regular age arts programs irst- and second- in five elementary eld City schools. treatment involves r aides who ask l them a story . The stories edited and typed des. After the ned, the pupils are them. The ed in this project the Mansfield staff objectives, select sign, write the nd guidelines, and write the evaluation reports.	The project started July 1, 1975, and is scheduled for completion by June 30, 1976. It is approximately two-thirds completed.	This project is funded by contract with the Mansfield city schools in the amount of $5,000. The percentage of CVE institutional funding provided for budget year 1976 by this contract is less than 1 percent.	The following are the major accomplishments for this project: (1) Approximately 3,500 stories have been typed and shared with other students; (2) several stories have been printed and placed in all of the libraries in the Mansfield elementary schools; (3) the data that have been analyzed suggest that the treatment groups are developing their skills on the appropriate objectives more rapidly than the control groups.

Project	Objectives and strategies	Status	Funding	Accomplishmen
Strenghtening State Leadership in Career Education: Evaluation Assistance for the Council of Chief State School Officers Project	The scope of work in this project involves developing instruments and data-collection plans. Additionally consultative assistance on the change process and communication systems is also being provided.	This project commenced October 1, 1975, and is scheduled for completion by June 30, 1976.	This project is funded by contract with the Council of Chief State School Officers in the amount of $3,673. The percentage of CVE institutional funding provided for budget year 1976 by this contract is less than 1 percent.	Three evaluation instrume been developed for this p Additionally, data analys conducted for each of the

nd strategies	Status	Funding	Accomplishments
k in this project ing instruments and plans. Additionally istance on the nd communication being provided.	This project commenced October 1, 1975, and is scheduled for completion by June 30, 1976.	This project is funded by contract with the Council of Chief State School Officers in the amount of $3,673. The percentage of CVE institutional funding provided for budget year 1976 by this contract is less than 1 percent.	Three evaluation instruments have been developed for this project. Additionally, data analyses were conducted for each of the instruments.

Table 9. Information and field services

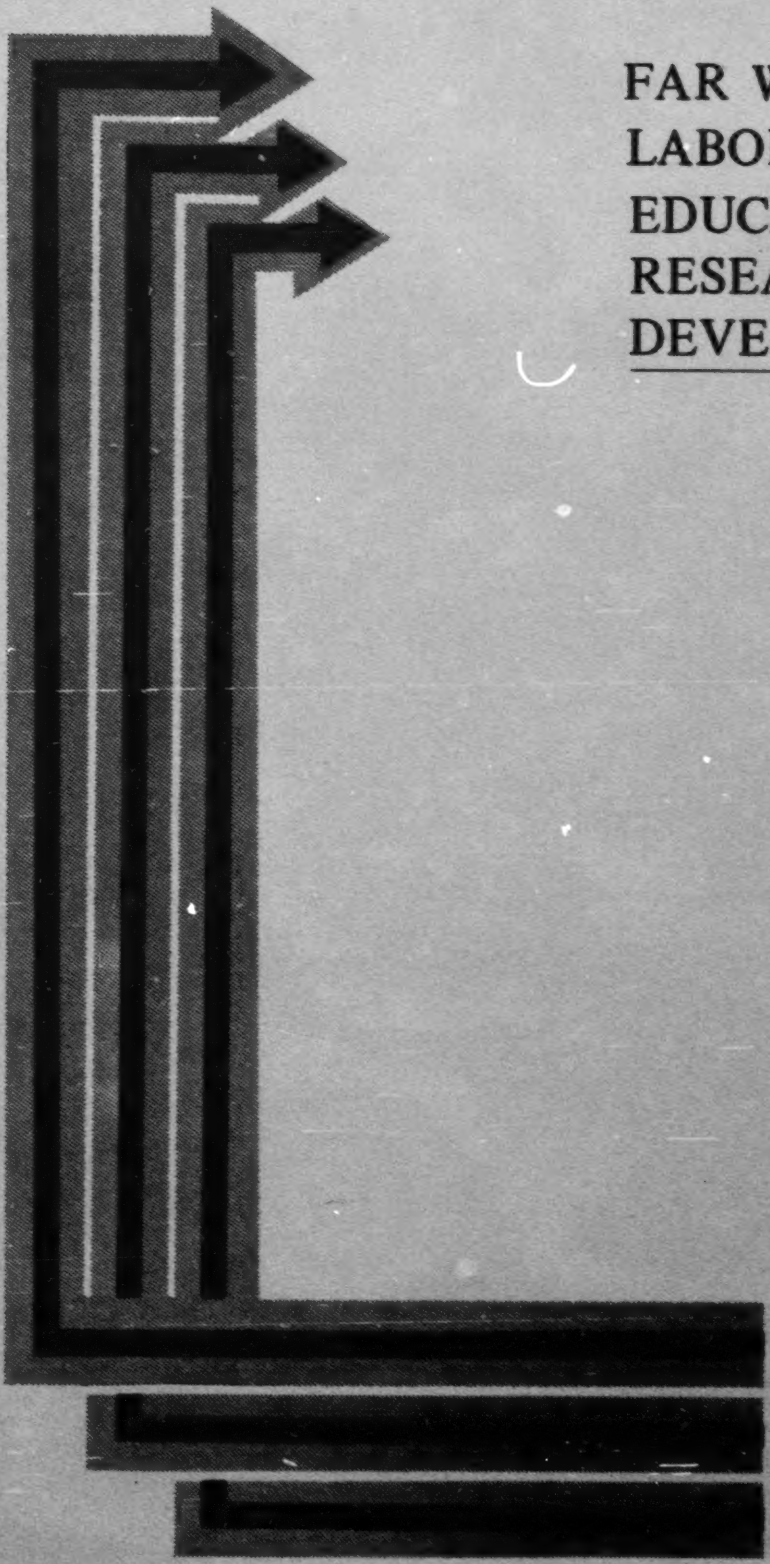
Project	Objectives and strategies	Status	Funding	Accomplishments
Abstracts of Instructional and Research Materials in Vocational and Technical Education (AIM/ARM)	The purpose of the AIM/ARM project is to achieve effective use of research reports, program descriptions, and instructional materials by researchers, developers, practitioners, and others. The objectives include linking the information network, preparing materials for the system, reproducing and distributing AIM/ARM publications, conducting literature searches for USOE/BOAE consulting with USOE and affiliated agencies, preparing interpretative papers, submitting information to other information systems, and engaging in special synthesis work.	AIM/ARM is under a USOE contract awarded in 1975 under RFP 75-8, which provided for two 1-year extensions. The project is beginning its first 1-year extension which continues until February 28, 1977.	AIM/ARM has been funded by the U.S. Office of Education since 1972. Current funding by contract with the USOE for the period March 1, 1975, through February 28, 1977, amounts to $398,828. (Budget year 1975 amounts to $188,829 and budget year 1976 to $210,000). The percentage of center institutional funding provided by this contract is budget year 1975, 4 percent and budget year 1976, 5 percent.	Since 1972, the AIM/AR has produced (1) 28 qu or bimonthly abstract j issues; (2) 4 annual in been produced; (3) 12 p bibliographies have bee (4) 7 published instruc materials catalogs are (5) computer search tap prepared; and (6) 10 in papers are available.
Development and Utilization of Metric Education Instructional Materials in Vocational, Technical, and Adult Education	The Metric project is aimed at providing professional target audiences with materials to aid in teaching vocational, technical, and adult basic education metric concepts and skills that can be applied to selected work situations.	The project is midway in its third year.	The Metric project was funded by contract with the U.S. Office of Education in the amount of $496,071. The percentage of CVE institutional funding provided for budget year 1974 by this contract is 15 percent.	The Metric project has (1) Metric Education: Bibliography for Vocati Technical, and Adult E (2) Metric Education: Paper for Vocational, and Adult Education; a tional materials.
DOD Curriculum Materials Utilization in Vocational Education	The main purpose of the DOD project is to design a system for delivering relevant Department of Defense curriculum materials to civilian vocational schools.	The DOD project is in the second half of a 12-month effort to end June 30, 1976.	This project is funded by USOE in the amount of $186,931. This is 4 percent of total CVE funding - fiscal year 1975.	The DOD project has ac to date the following: data is under analysis on existing informatio been submitted; and (3) of instruction are cat

Table 9. Information and field services

nd strategies	Status	Funding	Accomplishments
he AIM/ARM project fective use of , program d instructional earchers, devel- pers, and others. nclude linking the rk, preparing e system, repro- buting AIM/ARM ducting literature /BOAE consult- nd affiliated ng interpretative g information ion systems, pecial synthesis	AIM/ARM is under a USOE contract awarded in 1975 under RFP 75-8, which provided for two 1-year extensions. The project is beginning its first 1-year extension which continues until February 28, 1977.	AIM/ARM has been funded by the U.S. Office of Education since 1972. Current funding by contract with the USOE for the period March 1, 1975, through February 28, 1977, amounts to $398,828. (Budget year 1975 amounts to $188,829 and budget year 1976 to $210,000). The percentage of center institutional funding provided by this contract is budget year 1975, 4 percent and budget year 1976, 5 percent.	Since 1972, the AIM/ARM project has produced (1) 28 quarterly or bimonthly abstract journal issues; (2) 4 annual indexes have been produced; (3) 12 published bibliographies have been completed; (4) 7 published instructional materials catalogs are available; (5) computer search tapes are prepared; and (6) 10 interpretative papers are available.
t is aimed at ional target terials to aid ional, technical, ducation metric ls that can be ed work	The project is midway in its third year.	The Metric project was funded by contract with the U.S. Office of Education in the amount of $496,071. The percentage of CVE institutional funding provided for budget year 1974 by this contract is 15 percent.	The Metric project has produced (1) *Metric Education: An Annotated Bibliography for Vocational, Technical, and Adult Education*; (2) *Metric Education: A Position Paper for Vocational, Technical, and Adult Education*; and (3) instructional materials.
of the DOD project stem for deliver- rtment of Defense ls to civilian s.	The DOD project is in the second half of a 12-month effort to end June 30, 1976.	This project is funded by USOE in the amount of $186,931. This is 4 percent of total CVE funding - fiscal year 1975.	The DOD project has accomplished to date the following: (1) Survey data is under analysis; (2) a report on existing information systems has been submitted; and (3) DOD programs of instruction are cataloged.

Project	Objectives and strategies	Status	Funding	Accomplishm
Task Inventory Exchange	The purpose of the Task Inventory Exchange project was to promote the awareness, sharing, availability, and utilization of task inventories and related information by the various curriculum specialists, personnel managers, training directors, and others developing and conducting occupational training programs.	The TIE project has been completed.	The TIE project, July 1, 1974, through February 29, 1976, was funded under a grant from the U.S. Office of Education in the amount of $84,996. The percentage of CVE institutional funding provided for budget year 1976 by this grant is 2 percent.	The Task Inventory Exc has accomplished the f (1) Collected and anno task inventory documen 52 reference documents lished and distributed *of Task Inventories,* (a national symposium o analyses and task inve

and strategies	Status	Funding	Accomplishments
the Task Inventory ct was to promote sharing, availability, n of task inventories formation by the ulum specialists, gers, training others developing occupational ms.	The TIE project has been completed.	The TIE project, July 1, 1974, through February 29, 1976, was funded under a grant from the U.S. Office of Education in the amount of $84,996. The percentage of CVE institutional funding provided for budget year 1976 by this grant is 2 percent.	The Task Inventory Exchange project has accomplished the following: (1) Collected and announced 401 task inventory documents and 52 reference documents, (2) published and distributed the Directory of Task Inventories, (3) conducted a national symposium on task analyses and task inventories.



FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT

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FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT

Mission

The mission of the Far West Laboratory (FWL) for Educational Research and Development is to improve learning opportunities for individuals of all ages. The laboratory staff works to improve teaching practices, instructional materials, and organizational arrangements for delivery of educational services. To accomplish its mission, the laboratory staff conducts research, develops new materials or processes, and provides technical assistance.

An underlying assumption of this mission is that improvement of learning is an extremely complicated social, political, and technical undertaking that cannot be performed without the full participation of the individual and institutions directly responsible for education. Since the laboratory is one step removed from a State education agency (SEA), local education agency (LEA), or institution of higher learning (IHE), all laboratory efforts incorporate interaction of the laboratory's capability (persons, processes, and facilities) with the needs and capabilities of the field in order to support and ultimately bring about improved learning opportunities and outcomes.

The laboratory's broad program goals are (1) to identify and apply effective teaching/learning within the context of the real world of the classroom; (2) to provide evaluation support for application and implementation of products and processes that improve learning and to conduct research and development on the change process itself within the context of the operating educational system; (3) to design and introduce new approaches to the provision of learning opportunities which are not limited by the constraints of the existing educational system and/or context; and (4) to provide products, processes, and assistance to support improvement of the learning for all learners. Toward the achievement of these goals, the laboratory has made major programmatic thursts in teaching/learning, research and development, education reform, and equity.

The four program goals are complementary and mutually supportive. Because the teaching/learning goal deals most fundamentally and directly with classroom and learner outcomes, the laboratory has maintained this goal as its first priority, but has sustained efforts toward the other three problems. R. & D. in product development and utilization, reform, and equity sustain the efforts to improve knowledge and practices in the teaching/learning processes as applied in the field. The laboratory views improved practice as the broad base which will ultimately lead to improved learning opportunities and outcomes for all learners.

The titles of five papers prepared at a senior staff retreat give an indication of the possible broad directions for the future of the laboratory:

- An Interactive Model of Research
- New Modes of Research Decisionmaking.
- Education and Living.
- Education in the Context of a Macrosystem.
- Basic Research and Support of Thinking.

Governance

The Far West Laboratory is a public agency created under the provisions of the California Government Code, which provides for the joint exercise of powers among the following signatories to the agreement:

- The Regents of the University of California.
- The California State Board of Education.
- The Trustees of the California State University and Colleges.
- The Board of Education of the San Francisco Unified School District.
- The Board of Regents, University of Nevada.
- The Nevada State Board of Education.
- The Board of Regents, University of Utah.
- The Utah State Board of Education.

Representatives of these eight signatories and eight additional persons selected by them, according to criteria described in the Joint Powers Agreement, compose the board of directors of the laboratory. The laboratory director serves as an ex officio member of the board.

"Rules for the Conduct of Business of the Agency" are developed by the board; these rules govern the overall conduct of business at the laboratory. Although the main responsibility for establishing new programs rests with the board of directors, existing laboratory programs seek advice from separately constituted groups of experts. These experts include many locally and nationally known educators, representing many geographic areas and a broad range of ethnic interests.

Management

The Joint Powers Agreement specifically vests in the laboratory director the responsibility of the position of "chief administrative officer of the agency." The laboratory director, with board approval, selects eight associate laboratory directors to assist him in the management of the laboratory.

The laboratory research activities are performed within a project management system, which insures control and efficiency. Key personnel (principal investigators and other research professionals) are directly assigned to specific projects with augmenting staff drawn from a laboratory-wide talent pool to perform individual tasks under the supervision of the project's principal investigator. Principal investigators report directly to the laboratory director. Associate laboratory directors, each with an area of specialization, provide technical assistance to both the laboratory director and to the principal investigator.

Each project retains an independent focus under its principal investigator and, in addition, is surrounded by diverse support services. These services assist the individual investigator with each of the following functions: Planning, organization, motivating, and controlling. Each principal investigator coordinates project effort with appropriate Government representatives, while the administration section maintains similar relationships with governmental contracting officers. Although the laboratory director and associate directors provide oversight functions, project-management functions are primarily the responsibility of the principal investigators.

Staff

The 170-member laboratory staff consists of 89 professionals, 18 support professionals, 11 administrative staff, 9 technical staff, and 43 clerical staff.

Staff Development

Staff development at the Far West Laboratory is integrated with all other activities and occurs on a continuing basis. It involves, in one way or another, each and every member of the laboratory--from board members to the lowest paid employee. There is now no formal or isolated activity within the laboratory identified as "staff development."

A significant portion of the professional staff is currently either attending classes or working on advanced degrees at a college or university within the Bay Area.

Figure 1. Organizational structure

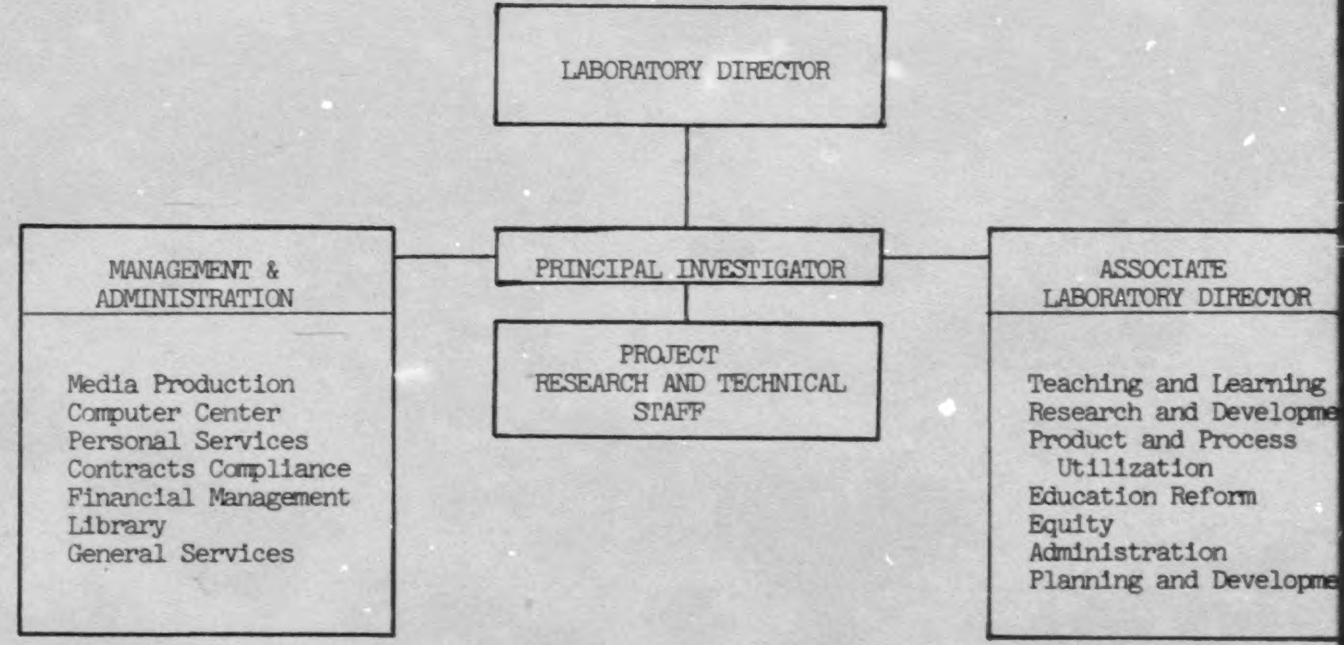
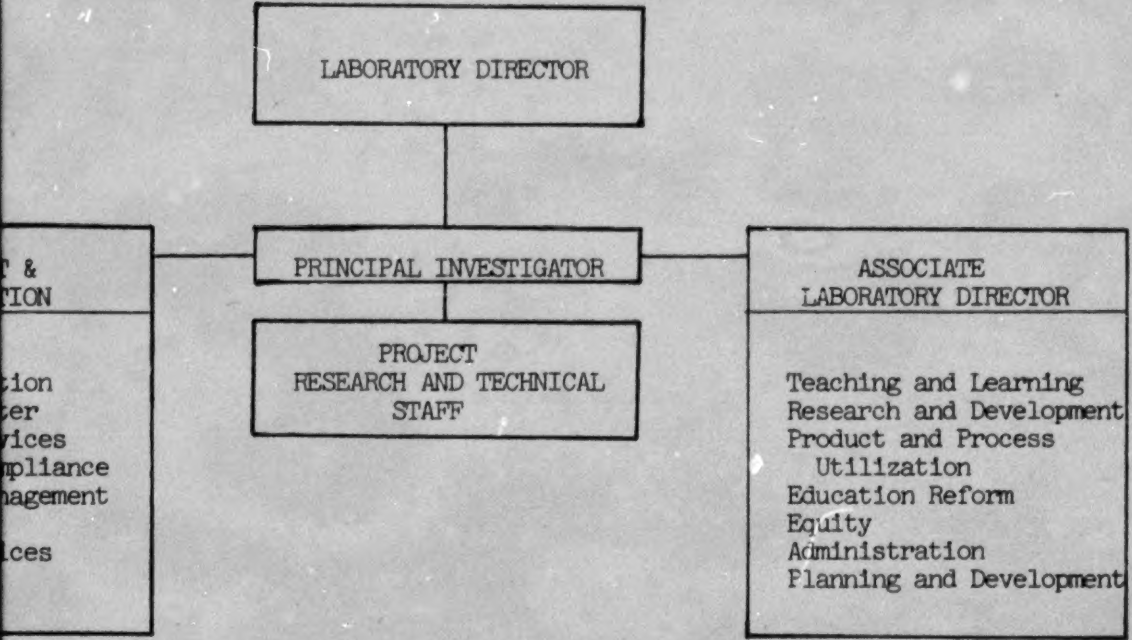

LABORATORY DIRECTOR
PRINCIPAL INVESTIGATOR
PROJECT RESEARCH AND TECHNICAL STAFF
MANAGEMENT & ADMINISTRATION
Media Production
Computer Center
Personal Services
Contracts Compliance
Financial Management
Library
General Services
ASSOCIATE LABORATORY DIRECTOR
Teaching and Learning
Research and Developme
Product and Process Utilization
Education Reform
Equity
Administration
Planning and Developme

Figure 1. Organizational structure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PRINCIPAL INVESTIGATOR
PROJECT RESEARCH AND TECHNICAL STAFF
ASSOCIATE LABORATORY DIRECTOR
Teaching and Learning
Research and Development
Product and Process Utilization
Education Reform
Equity
Administration
Planning and Development

Table 1. Staff discipline profile

PROJECT, PROGRAM, OR AREA	FULL TIME STAFF	STAFF WITH DEGREES	EDUCATION			PSYCHOLOGY			SOCIOLOGY & ANTHRO.			OTHER			
			D	M	B	D	M	B	D	M	B	D	M	B	
Effective Teacher Education	7	6	3	4	2			2						2	
Flexible Learning	4	4	1				2	1		1	1			2	1
Instruction and Training Systems	6	4	1		1	1	2	1					1	2	2
Beginning Teacher Education Study	13	12	2	4	3	3	3	6			3		2	3	2
Experience-Based Career Education	18	13	2	3	2	3	5	3			1		3	5	2
General Assistance Center/STRIDE	22	15	3	4	1	1		2		2	4	1	4	6	6
Responsive Education	17	13	4	5	4	2	4	3	1		2		1	4	4
Adult Basic Education	5	4	1	2	1					1			1	3	1
NSF Math and Science Implementation	2	2										1	1	2	
Mediated Training	4	3		2	1		1	2							2
Teachers' Centers Exchange	3	3											1	3	1
Dissemination/Utilization	11	6		1	1	1	1	1			2		1	2	2
Application Research to Teaching	3	2	2	1							1		1	1	1
Head Start Supplementary Training	5	2			1					1		1		1	
Management/Administration/Support	50	18	1	2	2	1	1				1	1	3	15	1
TOTALS	170	107	20	20	19	12	19	21	1	5	15	4	19	51	25

LEGEND: Total Degrees: D=Doctorates, M=Masters, B=Bachelors Credentials: S=Secondary, E=Elementary,

Table 1. Staff discipline profile

OR AREA	FULL TIME STAFF	STAFF WITH DEGREES	EDUCATION			PSYCHOLOGY			SOCIOLOGY & ANTHRO.			OTHER			CREDENTIALS		
			D	M	B	D	M	B	D	M	B	D	M	B	S	E	O
ication	7	6	3	4	2			2						2		3	3
	4	4	1				2	1		1	1			2	1	1	3
ing Systems	6	4	1		1	1	2	1					1	2	2	1	
ication Study	13	12	2	4	3	3	3	6			3		2	3	2	3	2
er Education	18	13	2	3	2	3	5	3			1		3	5	2	1	6
nter/STRIDE	22	15	3	4	1	1		2		2	4	1	4	6	6	6	6
	17	13	4	5	4	2	4	3	1		2		1	4	4	7	9
	5	4	1	2	1					1			1	3	1	2	1
Implementation	2	2										1	1	2			
	4	3		2	1		1	2							2		1
hange	3	3											1	3	1	1	
tion	11	6		1	1	1	1	1			2		1	2	2	2	2
to Teaching	3	2	2	1							1		1	1	1	1	
ary Training	5	2			1					1		1		1			1
tion/Support	50	18	1	2	2	1	1				1	1	3	15	1	2	1
TOTALS	170	107	20	20	19	12	19	21	1	5	15	4	19	51	25	30	35

: D=Doctorates, M=Masters, B=Bachelors   Credentials: S=Secondary, E=Elementary, O=Other

Several others have completed such advanced degrees while employed at the laboratory. Most of this staff development is undertaken at the initiation of the employee, and occurs on nonlaboratory time. Dissertation topics are frequently selected in close harmony with the employees' laboratory assignments. Much staff development occurs in an on-the-job context. Each associate laboratory director has an assigned responsibility to assist less advanced staff members grow and develop both their technical and managerial skills.

Nonprofessional staff have also been involved in various forms of on-the-job or work-training activities. The laboratory cooperates with job-training programs sponsored by Federal or local government agencies when and wherever possible.

The laboratory has developed (with NIE and OE support) and utilized training materials for preparing persons who wish to become skilled in educational R. & D. These materials have been used in internship both within the laboratory and in other organizations. Senior staff involved with administrative work have participated in seminars, and special training sessions have been developed to prepare supervisors to cope with personnel administration problems.

At the most general level, the laboratory has scheduled seminars involving all senior staff on professional and technical topics. A special meeting each year of the board of directors with the key staff provides an important setting for staff development.

The policy of the laboratory is to support staff development in appropriate ways to fit the need of the individual employee. To the extent possible, the resources of the laboratory are made available to support staff development. We believe that investments in this area contribute to the effectiveness of our work.

Training Provided to Others

Training is provided to others than laboratory staff whenever and however possible within the framework of the agency's present funding structure. Perhaps its most significant efforts in this area are represented in its participation in the Educational Research and Development Leadership program. This unique learner-centered, competence-based program was launched by the University of California at Berkeley in 1973 in cooperation with the Far West Laboratory.

The goal of the doctoral program is to identify, enroll, and train a small number of men and women of varied ethnic and economic backgrounds who have both the potential and motivation to become R.D.D. & E. managers.

In the graduate program, each learner works on sets of skills and knowledge critical to some aspect of educational R.D.D. & E. work, immediately applying what is learned to current work assignments.

Two communities provide the resources and energies to guide the program: The School of Education (of UC) and the Far West Laboratory.

Other short-term training is provided to various institutions and individuals through many laboratory programs.

Institutional Relationships

In its 10-year history, the laboratory has developed a strong capability for direct assistance to educational agencies. In the earlier years, funding policies under USOE provided general support for extensive field liaison and linking activities on a regional basis. We can now engage in such activities only where they are included in the scope of work of a specific contract. In order to compensate for this change in support to provide assistance to the field in a flexible and adaptive manner, the laboratory has sought other educational agencies (national and sometimes international) willing to work cooperatively with the laboratory. This long involvement of laboratory staff in liaison and technical assistance activities has produced a capability within the laboratory to relate to the real problems of the field and to develop and test solutions to these problems. The laboratory maintains a broad range of disciplines and skills within the capability of the staff in order to realistically serve the broad range of field problems with which we work.

The FWL is constantly approached for liaison and technical assistance by representatives of agencies ranging from early childhood education and parent educators to institutes of higher education--from small rural schools to State departments of education and national organizations. The laboratory does in fact serve, in a constructive capacity, a full range of agencies on a national and international basis.

Facilities

The laboratory occupies approximately 85,000 square feet of space in the Center for Educational Development (CED), a former warehouse which was remodeled as an educational facility. The CED is located a short distance from downtown San Francisco and provides easy access to Bay Area metropolitan resources, as well as to major transportation facilities. A parking lot for over 200 vehicles is included as part of this laboratory-owned installation.

The laboratory owns and operates a Varian model V-73 minicomputer with a storage capacity of more than 200 million characters plus ancillary hardware including line printers, magnetic-tape drives, disks, terminals, and card readers. The center performs inhouse statistical and business processing in addition to communications with major computer centers at the University of California at Los Angeles and Stanford University. It also supports a network of interactive terminals with the Center for Educational Development and at Bay Area school districts.

The media services complex includes a specially constructed and equipped area for providing black-and-white television productions for prototype and experimentation purposes, 16mm color and black-and-white motion-picture films, still photography graphic arts, audio production, and printing/reproduction. Outside commercial firms are contracted for special-purpose work on an as-required basis.

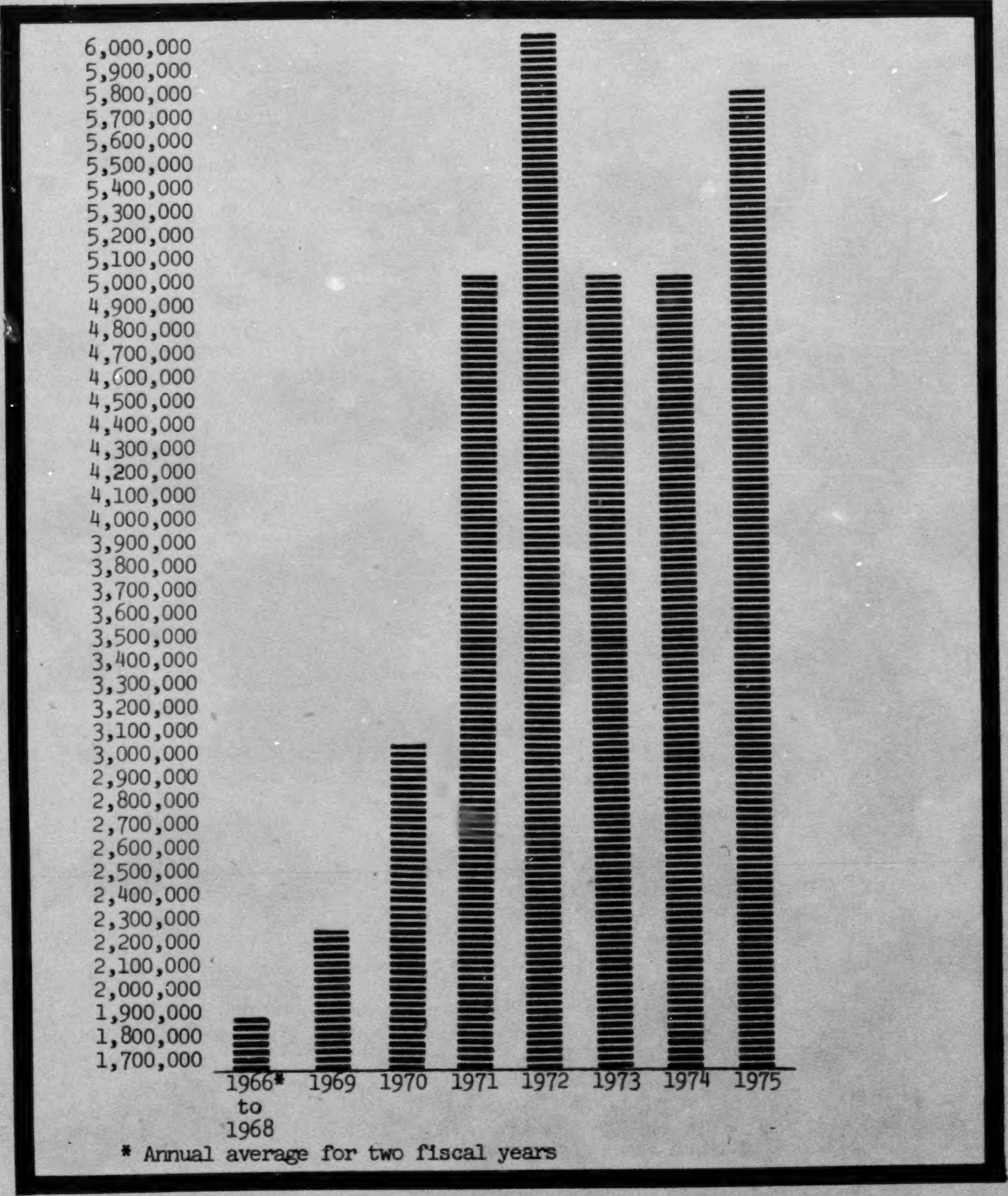
Television equipment includes Sony portable systems, six Diamond Power black-and-white cameras (three in the studios, three in the mobile van), Grass Valley and Conrac terminal units, and editing-facility equipment for full sound synchronization and special effects, and cameras for graphics/still photos insertion. Color TV production is obtained through contracts with commercial firms in northern and southern California.

Motion-picture equipment includes an Eclair NPR camera for shooting color or black-and-white sound films, supported by a Nagra III recorder, three editing stations, an Amega 3-dubber interlock system, a Moviola and Siemens interlock system, and an Amega 16mm magnetic recorder for postproduction needs.

Facilities/equipment used interchangeably for TV and motion-picture production includes two studios with separate control rooms, Mole Richardson lighting units, and two Langevin audiomix consoles with full equilization.

In addition to the equipment listed for TV and motion-picture production, media services includes gear for recording, transferring, editing, and duplicating (Ampex professional one-fourth inch audiotape and Sony cassettes, with a Pentagon high-speed duplicator).

Figure 2. Funding history



* Annual average for two fiscal years

Photography resources include a complete darkroom equipped with a film dryer, two print dryers, copy stand, slide duplicator, and an Omega "D" enlarger, photo-finishing equipment, and two slide-editing rooms; plus complete Nikon camera systems for 35mm work and Rolliflex and Graflex Norita systems for 2¼-inch work.

Library materials include a complete ERIC microfiche collection and associated equipment, more then 7,000 reference books on educational research, educational psychology, teaching, etc.; approximately 2,000 R. & D. documents from other reserach and development laboratories, centers, and other organizations across the Nation; and 80 active subscriptions to periodicals dealing primarily with education-related subjects. Close cooperation is maintained with the Bay Area reference center, the University of California at Berkeley library, and the San Francisco public library to augment on-site library facilities and operations.

CURRENT NIE PROJECTS

Project EFFECTIVE TEACHER EDUCATION

Objectives and strategies. From 1973 to 1975 the project focused on the completion of "Minicourses" (self-instructional, competency-based teacher-training packages) which were developed and field tested under an OE contract between 1968 and 1972. The major focus was to conduct research to determine effects upon pupils of teaching skills related to questioning, math tutoring, and independent learning. Four approaches to the study of teaching which were contained in the research designs were examined.

In 1976 the program will conduct two types of activities. Under work unit I (monitored by dissemination staff of NIE) a pilot study of inservice teacher-training needs will be conducted. It will (1) develop user-based descriptions of inservice products; (2) establish criteria for user approval and critique of inservice products; and (3) study process used to adapt existing inservice products and local needs. Work unit II includes the following two reserach studies related to the allocation and utilization of teaching/learning time and how this affects student outcomes: (1) A case study at the fourth-grade level of the relationship between appropriate allocation and utilization of teaching/learning time during regular classroom instruction in mathematics and student cognitive, affective, and social outcomes in mathematics; and (2) a case study of the relationship between appropriate allocation and utilization of teaching/learning time given particular instructional goals in mathematics in grade 4. An experimental teaching unit will serve as the vehicle for control of learning purposes and content. An anthropological-ethnographic research design will be used. In addition, the project has proposed a model for R. & D. to be tested and applied.

Status. It is anticipated that the project will be funded during fiscal years 1977-78. It will add to or build upon work currently being done and that is identified as being important. The first case study is completed and the second study will be completed shortly. Data analysis will be conducted during the summer (July-August 1976). Earlier completed studies are now available through the ERIC system.

Funding.

1973-75	$2,186,671	
1976.	186,027	(Work unit I)
	199,976	(Work unit II)
Total	2,572,674	

This project was funded by OE, 1968-72.

Accomplishments. A new model for applied R. & D. in teaching was developed. Two studies were conducted which expand use of ethnographic procedures in research on teaching. A pilot study of teacher-based inservice training was conducted.

Monitoring history.

Dates	Project officer	Activity
December 1973- February 1975	Mary Johnson, Charles Wheeler	General monitoring.
July 1974		Site visit by Charles Wheeler.
March 1975- November 1975	Virginia Koehler	General monitoring.

Project COOPERATIVE DISSEMINATION AND LINKING TRAINING

Objectives and strategies. This is one part of a project representing the cooperative effort of eight labs and centers. Goals of the project are (1) to provide more effective dissemination of materials and knowledge developed by labs/centers (L/C's) in the area of educational planning, management, and change support; and (2) to make available coordinated materials and training resources to linking agents.

Strategies to be used include (1) collecting, describing, and integrating the set of resources in a form which permits selection of useful materials; (2) orienting, training, and building a support system around the set of resources; and (3) preparing, responding to, and revising technical/conceptual papers to inform work in (1) and (2) above.

Status. This project began in fiscal year 1976 and is expected to continue in fiscal years 1977 and 1978. For 8 years FWL has developed materials to train and/or support educational administrators and linking agents. These include (1) the educational management materials related to goal setting and program design; (2) the educational information consultant training materials; and (3) the development, dissemination, and evaluation materials. The current project might be seen as a logical continuation of the educational management program which came to a conclusion in fiscal year 1975.

Funding. This dissemination activity began in fiscal year 1976 at a funding level of $75,078. Funds are designated for this activity from the dissemination and research group.

Accomplishments. This dissemination activity has just begun. The project expects to have five or six laboratory/center staff ("resource specialists") who can provide an orientation to the entire set of materials by June 1976. Each of the five or six labs/centers will collect a total set of the materials. The project will provide eight orientations in 1976.

Monitoring history.

Dates	Project officer	Activity
November 1975 to present	Spencer Ward	General monitoring. Frequent telephone contacts with project staff. Dec. 16, 1975, meeting with NIE monitor and another NIE staff person. Mar. 1-5, 1976, meeting of representatives of all L/C's at FWL.

Project AN EXCHANGE FOR AND ABOUT TEACHERS' CENTERS

Objectives and strategies. The initial planning which established this project was part of the feasibility study conducted during phase II of the Information/Utilization program at FWL. During this study, *Exploring Teachers' Centers* was published. The book is the information gathered over a period of 1 year in about 40 American teachers' centers and among people and projects interested in teachers' centers as an alternative form of continuing education for practicing teachers. *Exploring* has been widely distributed and is considered a valuable resource.

The purpose of the current work is to support an organized, but informal, network which (1) strengthens the effectiveness of established centers through information and resource sharing, and (2) assists emerging centers to evolve alternative strategies for staff development based on the concept of teachers taking more responsibility for their professional growth.

The project's miniawards program helps increase face-to-face interaction among teachers' centers. Awards are made as payments from FWL to reimburse a center's small, incremental expenses incurred during a networking project with other centers or with educators involved in starting a center.

Exchange also answers requests for information by making referrals to individuals and centers who can provide the needed assistance. The number of inquiries is growing substantially, as is the network.

The project will produce a carefully documented body of research which will describe and analyze the potential of informal, interactive networks to (1) increase the problem-solving capacity of network participants, and (2) disseminate and facilitate the implementation of the teachers' center concept.

Status. Two-year contract with option to renew for 3 additional years. Awarded to FWL on a sole source basis.

Funding.

Fiscal year 1976	*$213,114	(NIE)
	23,000	(Rockefeller Brothers)
Total.	236,114	

*Total--$637,700 for first 2 years of this project.

Accomplishments. The advisory committee was formed and one meeting was held. The miniaward guidelines have been approved, distributed, and the program is in operation. Work has started on documentation and on the second volume of Exploring Teachers' Centers.

Monitoring history.

Dates	Project officer	Activity
August 1975	Mary Harahan	2-day visit to discuss FWL sole source proposal.
November 1975		Kathleen Devaney visited NIE to discuss her project.
January 1976 to present	Judith Cherrington	2¼-day visit to attend first advisory committee meeting with two other NIE staff.
March 1976		Lorraine Thorn visited NIE to discuss project.

Project FLEXIBLE LEARNING SYSTEM

Objectives and strategies. The objective of the program from 1973 to 1975 was to develop a training system for adults who work in early childhood education programs (ages 3-9). A series of 15 competency-based training units for early childhood educators was developed and field tested. The program is based on the responsive model adapted from programs such as Head Start and Follow Through.

During 1976-77 the project will focus on the utilization and dissemination of the training units developed during the 1973-75 contract period. The units will be revised and, when necessary, trainers' manuals will be developed to accompany them. The project staff will train individuals from various field sites throughout the country to use the materials. These individuals will return to their original setting and in turn train individuals in the various training settings. Research on questions which are critical to the concept of incorporating a competency-based approach into ongoing training programs will be conducted.

Status. The project will be funded for fiscal years 1977-78 to finalize the training units for use in the field.

Funding.

1973-75	$927,223 (3-year contract)
1976	216,000
Total	1,143,223

Accomplishments. The program was developed, field tested, and is in the process of disseminating a set of competency-based learning units for early childhood educators. Each unit provides training for 8 to 12 weeks; the system includes a set of toys and games, a 16mm film, and four 30-minute color video tapes. The units focus on competencies in the following areas: Early childhood programs, toys and games, senses and perception, problem solving, self-concepts, classroom arrangement, classroom management, integrating language, literature experiences, play, concept development, selection of materials (black or Chicano perspectives), cognitive growth, and communicating and working with parents. The program is being disseminated via the "training of trainers" and the development of four demonstration sites across the country. To date, this has included the training of more than 35 trainers representing some 30 different institutions and training programs.

Monitoring history.

Dates	Project officer	Activity
March 1973-March 1974	Richard Harbeck, Martin Engel, Kent Sullivan, Thomas Chibucos	General monitoring. January 1974, site visit by Chibucos.
April 1974-February 1975	Mary Jackson	General monitoring. May 1974, site visit.
February-September 1975	Kent Viehoever	General monitoring.
September 1975-May 1976	Esther Perry	General monitoring. September 1975, project review by Perry and three external consultants. December 1975, visit to NIE by Masako Tanaka (principal investigator).

Dates	Project officer	Activity
May 1976 to present	Kent Viehoever	General monitoring. Feb. 11-13, 1976, meeting of advisory panel (Millie Almy, Lillian Katz, Ken Komoski, Ken Howey) with staff. Apr. 19-20, 1976, advisory panel meeting on workshops and project documentation.

Project STABILIZATION OF AN EMPLOYER-BASED CAREER EDUCATION PROGRAM

Objectives and strategies. Experience-based Career Education (EBCE) was developed by FWL as an alternative program of secondary education, using the entire community as a school. Students have direct experience with a variety of resource persons in individually planned learning projects that blend growth in academic subjects, career awareness, and basic social skills. The broad goal is to produce students who are turned on to learning, and who view each situation and contact with employers, unions, and government as an educational opportunity. EBCE was designed to serve a diverse student body; however, field tests have confirmed that it can successfully serve the needs of a particular academic or social group. Fiscal year 1976 EBCE efforts are to establish relationships with LEA's regarding testing of lab-based EBCE models, to respond to LEA demand for assistance, to complete the publication of training and evaluation materials, to work with the OE VEA Part D Office with regard to its priorities for the fiscal year 1976 grants competition.

Status. This project is well into the implementation stage, with the contractor working with LEA's to test implementation strategies.

Funding.

Fiscal year 1974	$1,092,380
Fiscal year 1975	865,416
Fiscal year 1976	700,000
Total.	2,657,796

Accomplishments. EBCE is now documented and in use in demonstration, pilot, and other sites, where local staff have been trained by an FWL technical-assistance team. EBCE has established a national reputation as a method for reforming secondary education.

Monitoring history.

Dates	Project officer	Activity
April 1975 to present	Ronald Bucknam	General monitoring. May 1975, consultation in Washington, D.C. June 1975, consultation in Washington, D.C., and site visit. October and November 1975, consultations in Washington, D.C.

Project WOMEN IN MATHEMATICS

Objectives and strategies. Women are underrepresented in occupations requiring mathematics. Why? The contractor will examine the literature, analyze data on sex differences in level of achievement and participation in mathematics to synthesize what is currently known about the differences between boys and girls in math aptitude, develop a typology for classifying interventions, present alternative strategies NIE might support, and organize a conference to discuss all aspects of the subject.

Status. Contract executed April 5, 1976. Completion date: November 1, 1976.

Funding.

Fiscal year 1976	$19,347

Accomplishments. None yet.

Monitoring history.

Dates	Project officer	Activity
April 1976 to present	Mary Lou Randour	General monitoring.

Project NATIONAL BROKERAGE STUDY

Objectives and strategies. Prospective adopters of EBCE need a single source of information about the four EBCE models. It is proposed that a national EBCE agency represent the interests of the four participating EBCE labs. This agency would serve as a broker to prospective LEA adopters. This project thus is a feasibility study for such brokerage, charged with recommending a brokerage program to NIE.

Status. Work has begun, and will be completed by November 30, 1976.

Funding.

Fiscal year 1976 . . . . . $36,479

Accomplishments. "Brokers" have been selected from each of the four laboratories, and have attended a 1-week training session at each lab to become familiar with each of the four EBCE models. A description of common elements across the models have been drafted and circulated. A script for a national "brokerage" tape-slide presentation has been drafted.

Monitoring history.

Dates	Project officer	Activity
February 1976 to present	Ronald Bucknam	General monitoring.

Project LEARNING COORDINATOR: A STUDY OF THE ROLE (Phase 2)

Objectives and strategies. Because of the central role they play in the conduct of the EBCE program, learning coordinators have a potentially crucial effect on its successful adoption. The position of learning coordinator as defined in the EBCE models is new enough in education that little information is available regarding the attitudes, skills, and knowledge that staff members should possess and that districts should seek when implementing EBCE. This study seeks to (1) distinguish principles and procedures that will allow districts implementing EBCE to select learning coordinators (LC's), (2) help the LC applicant to understand fully the skills and tasks required in the role, (3) help those selected as LC's to adapt to this staff role, and (4) crystallize the functions and skills associated with the role so that preparation programs may be better designed.

Status. Work began in spring 1976 and will be completed by November 30, 1976.

Funding.

Fiscal year 1976 . . . . . $23,617

Accomplishments. Questionnaire designed and pilot tested. A revised survey questionnaire has been mailed to selected respondents.

Monitoring history.

Dates	Project officer	Activity
April 1976 to present	Ronald Bucknam	General monitoring and 1 site visit.

Project THE WORK ETHIC STUDY

Objectives and strategies. Most observers agree that values and atitutdes toward work in America are undergoing significant change, but there is disagreement about what work ethics and values currently prevail or are emerging. This study will summarize current literature; examine a sample of career-education curriculum materials to determine what work-related values are being promulgated; ascertain what values significant groups in our society believe ought to be encouraged; and summarize findings in ways that will prove useful to decisionmakers.

Status. Identification of a sample of career-education materials and analysis of existing data have been under way since April 1976.

Funding.

Fiscal year 1976 . . . . . $16,162

Accomplishments. Literature review near completion; sample materials in process of selection. Final report is due in October 1976.

Monitoring history.

Dates	Project officer	Activity
April 1976 to present	Ronald Bucknam	General monitoring and 1 site visit.

Project CAREER EDUCATION STAFF DEVELOPMENT

Objectives and strategies. Inservice training for career education has been regarded as a cornerstone for career-education effectiveness. This study will examine the current situation regarding inservice training, identify problems that may exist, propose alternative solutions, and make recommendations concerning needs and priorities for federally supported R. & D. The results will consist of a promary analysis report, plus reviews and commentary by representatives of key sectors in education.

Status. A commissioned paper writer and seven commentators have been working on the report since March 1976.

Funding.

Fiscal year 1976 . . . . . $14,344

Accomplishments. The principal author has been selected.

Monitoring history.

Dates	Project officer	Activity
April 1976 to present	Ronald Bucknam	General monitoring.

Project INFORMATION FOR LOCAL DECISIONMAKERS FOR EBCE IMPLEMENTATION

Objectives and strategies. The current and future of EBCE Impelmentation activity provides a valuable source of information about the decisionmaking processes of LEA's, when they are considering the adoption of an educational program alternative. This study will elicit, analyze, and report data from LEA's to determine the types of information needed to make the EBCE adoption decision.

Status. Work began in spring 1976 and will be completed by November 30, 1976.

Funding.

Fiscal year 1976 . . . . . $9,972

Accomplishments. Preliminary form of questionnaires is ready for field testing.

Monitoring history.

Dates	Project officer	Activity
April 1976 to present	Ronald Bucknam	General monitoring. 1 site visit.

Project CALIFORNIA BEGINNING TEACHER EVALUATION

Objectives and strategies. The basic objective of this study, funded through California Commission for Teacher Preparation and Licensing, is to examine the relationship between teacher behavior and student achievement in reading and mathematics at the elementary school level. Far West is the major subcontractor.

To reach the above objective, a three-phase strategy has been employed. Phase I was a year of planning and development of the research strategy for the first year of fieldwork, and involved no data collection. Phase II (1973-74) was designed to develop measurement instruments and to develop hypotheses about relationships between teacher behavior and student learning--97 experienced teachers (in 43 schools in 8 California school districts) and their students participated in the work of the subcontractor for phase II, the Educational Testing Service. Phase III was divided into parts A and B, with all the design and implementation work being carried out by subcontract to the Far West Laboratory. Phase IIIA extends to June 1974 and includes fieldwork with a 200-teacher sample from 11 school districts. A subset of this sample (40 teachers) is the subject of clinical studies designed to identify additional teacher behaviors which might affect student learning. Additional studies of the relationship between time and achievement were undertaken during 1975-76. Phase IIIB will be used to conduct correlational studies to examine how changing teacher behavior affects variables closely correlated with learning outcomes. This phase is scheduled during 1976-78. In addition, an analysis of results and dissemination of information period is viewed as essential and will occur during 1978-79.

Status. The project is currently in the latter stages of phase IIIA and is presently designing the specific plans for phase IIIB for formal consideration by NIE after the May 1, 1976, submission date. Although the present contract period expires in November of 1977, present and projected plans call for revision of the time line, with no additional cost above the original contract estimates and due to unforeseen delays in data collection and analysis in phase II, to the end of 1978.

Funding. During fiscal 1973 (two OEO grants in the amount of $390,540) and fiscal 1974 (two NIE grants in the amount of $254,657) went to the California Commission for Teacher Preparation and Licensing but none of this went to the Far West Laboratory, which was not involved during this period. The following funding history is presented, therefore, to cover only the period of Far West Laboratory involvement.

Fiscal year 1975 . .	$694,000	(July 1, 1974-Dec. 31, 1974)
Fiscal year 1975 . .	514,117	(Jan. 1975-June 30, 1975)
Fiscal year 1976 . .	147,585	(July 1, 1975-Sept. 30, 1975)
Fiscal year 1976 . .	528,861	(Oct. 1, 1975-June 10, 1976)
Wedge (projected) . .	882,000	(July 1, 1976-June 30, 1977)
Fiscal year 1977 (projected)	630,000	(July 1, 1977-June 30, 1978)
Total.	3,396,563	

Accomplishments. Specific products from phase II include instruments to measure student achievement in an attitude toward reading and mathematics, teacher verbal ability, teacher ability to diagnose reading problems of students, teacher behavior through direct classroom observation, and school climate from the perspectives of both principals and teachers. Phase IIIA products include ethnographic studies of classrooms, studies of teachers planning for instruction and decisionmaking during instruction, and studies of both teachers' and students' perceptions of instruction. Two of the major conclusions derived from work to date are that there are no isolated teacher skills that seem to have a direct effect on student learning, but rather a behavior pattern or patterns that do affect learning and that there appear to be no generic teaching behaviors which positively affect learning outcomes across all grades and subjects. In the latter conclusion, there appear to be behavior patterns that affect achievement discriminately in different grades and different subject areas.

Phase III has analyzed the relationship between time and achievement, uncovered generic variables separating more effective from less effective teachers in reading and mathematics at second and fifth grade, described the difference in planning and perceptives of instruction between more and less effective teachers, studied and described teacher behavioral stability, studied and described impediments to the study of teacher effectiveness, and described effective instruction as always related to direct instruction of some sort.

Monitoring history.

Dates	Project officer	Activity
July 1, 1973- February 28, 1975	Virginia Koehler, Charles Wheeler	Site visits: Sept. 5-7, 1973, Wheeler. Nov. 15-16, 1973 Wheeler and Sobol. Jan. 24-25, 1975, Moles and Koehler.

Dates	Project officer	Activity
Sept. 18-19, 1973		Discussion and analysis of project and ETS subcontract upon transfer from OEO to NIE. Review by Koehler, Sullivan, Chalker, and McDaniels of NIE. External review by Research Advisory Board of the project.
Mar. 1, 1975-Sept. 30, 1975	Oliver Moles	General monitoring. Apr. 29-30, 1975, site visit by Moles. June 15-16, 1975, meeting at ETS to review procedures and findings from phase II with staff from Northwestern Secondary Analysis Center, basic skills staff, ETS and commission representatives. June 23-27, 1975, review of proposal for phase IIIA continuation (including FWL subcontract) by Moles, Koehler, McDaniels, David, Porter, Smith, Young of NIE.
Nov. 1, 1975 to present	Joseph Vaughan	General monitoring. Nov. 5-7, 1975, site visit by Vaughan.

Project

STUDY OF INFORMATION REQUIREMENTS IN EDUCATION: ANALYSIS OF MARKET FOR EDUCATION INFORMATION

Objectives and strategies. This project is being conducted through a subcontract to the System Development Corp. The market analysis is to determine the present and potential market for substantive information relevant to education. The contractor will describe present and potential information using behavior of certain key members of the education community. The contractor will also assess and describe the distribution of purposive information use among agencies and institutions involved in either practice or research related to elementary and secondary education in the United States. Together these two analyses should portray the way information is used in education practice or research, identify where information is used, and indicate something of the nature and scope of information use.

Status. The final report is to be submitted in June 1976. Data have been collected and are now being analyzed. The FWL subcontract runs from June 1974 to June 1976.

Funding.

Fiscal year 1974 . . . . . $101,083 (FWL subcontract)

Accomplishments. The study has produced market survey instruments for collecting data on the information market. Final results are not yet available. Preliminary data analysis has been conducted and two interim reports on the relationship among information users, purposes for information, and preferred sources of information use have been submitted to System Development.

Monitoring history.

Dates	Project officer	Activity
June 1974-August 1974	Samuel Rosenfeld	General monitoring. 2 site visits to prime contractor. 1 site visit to FWL.
August 1974-June 1976	Mollie MacAdams	General monitoring. Regular meetings of staff at NIE with advisory groups.

Project FIELD STUDIES IN URBAN DESEGREGATED SCHOOLS

Objectives and strategies. A 2½-year study is being conducted of an urban school in the San Francisco Bay area to identify and describe the processes that characterize an interethnic school. The goal is to produce a conceptual framework that can be applied to the examination of similar educational settings. Direct observation of the life of the school within the context of the community in which it is located will be employed to gather the major portion of the data required. In addition, questionnaires and interviews will be administered.

Status. This project began on August 1, 1975. It is scheduled to end on December 31, 1977.

Funding.

$106,702.

Accomplishments. An interim report on the first phase of the field studies is being completed and was delivered to NIE on May 31, 1976.

Monitoring history.

Dates	Project officer	Activity
August 1975 to present	Ray Rist	General monitoring.

COMPLETED OR TERMINATED NIE PROJECTS

Project EDUCATIONAL MANAGEMENT

Objectives and strategies. The overall purpose of the Educational Management program, which completed its work in February 1975, was to design, develop, and test training strategies, materials, and resources which schools can use to improve their own instructional planning and management capabilities. In attempting to achieve this goal, the program developed and evaluated six training units directed at increasing skill and knowledge in the area of instructional program planning. Each unit was designed to be self-contained and independent of the other units. The products were intended for use primarily by district-level staff who are directly responsible for program or curriculum development, selection, or revision; by school-level administrators; and by teachers who are involved in instructional program planning. If the products are fully utilized, the users should become more skillful in defining instructional programs that will achieve defined purposes, and in identifying and collecting information that can be used in identifying relatively effective and ineffective features of the programs with a view to program improvement.

Status. On the basis of a review of this project's basic program plan by the specialist and master panels in the 1972 lab/center review, this project was first awarded a 1-year contract for the period December 1, 1972, through November 30, 1973. In August 1973, the project was again reviewed by a team of NIE staff members and external experts. As a result of this team's judgment that the project's evaluation procedures and plans were inadequate, the project was informed that it would be funded for only one additional year (to end in November 1974), that only those products scheduled for delivery in fiscal year 1974 would be supported, and that NIE would not be committed to support beyond fiscal year 1974. After two brief no-cost extensions to allow adequate completion of products, evaluations, and final reports, the project staff completed its contracted work in February 1975. The project officer's reviews and final payments to the lab were executed shortly thereafter.

Funding.

March 1973	$318,000
December 1973 . . .	388,993
Total	706,993

Accomplishments. This project's most important products included six training units and a resource catalog. The training units were designed for use by people involved in instructional planning and management. They are entitled "Setting Goals," "Analyzing Problems," "Deriving Objectives" (these first three units combine to form the "Determining Instructional Purposes" package), "Designing Instructional Programs," "Planning Implementation: A Process Guide," and "Evaluation for Program Improvement." The resource catalog is entitled "Sourcebook of Training Products in Instructional Planning and Management." Finally, the project submitted seven final reports (one overall report and one report for each of the major products) and an extensive external evaluation of the "Determining Instructional Purposes" training package.

Monitoring history.

Dates	Project officer	Activity
1972		Review by panel B (Blau, Hopkins, Jaeger, Kaufman, Krathwohl, NIE staff) planning, management, and evaluation.

Dates	Project officer	Activity
December 1972- May 1974	George Carnett	General monitoring. Periodic phone calls, letters, and reviews.
August 1973	Theodore Blau, Paul Houston, George Carnett, Spencer Ward, Carlyle Maw	Major review.
May 1974- March 1975	Jon Schaffarzick	General monitoring. Periodic phone calls, letters, and reviews. Several meetings with principal stff members in Washington, D.C.
July 1974	Jon Schaffarzick	3-day site visit.

Project INFORMATION/UTILIZATION PROGRAM

Objectives and strategies. Phase I of this project consisted of two basic components: (1) Development of materials and (2) the planning of dissemination models. Products included a directory to the ALERT sourcebook of elementary curriculums, programs, and projects; information units dealing with new secondary social-studies programs; and information units dealing with new curriculums in elementary mathematics. Additional activities consisted of monitoring and improving the ALERT (Alternatives for Learning Through Educational Research and Technology) sourcebook, and facilitating the exchange of information and products among the lab and center network through the interlaboratory consortium. The planning activity consisted of (1) model development studies, (2) studies of measures of effectiveness, (3) context study, and (4) study of information centers. Phase II of this project involved an extension of activities of the information products section of the information/utilization program. The purpose of the extension was to conduct a feasibility study to verify and define the need for national technical assistance/networking/clearinghouse facility for American teachers' centers, and to develop a program and organizational structure for such an agency. *Exploring Teachers' Centers*, which discusses issues surrounding centers and profiles in 22 existing centers, was produced as part of the phase II activities.

Status. Final closeout procedures for this contract are almost completed. Both the Dissemination Casebook and Exploring Teachers' Centers have been widely distributed within NIE and outside and are considered valuable resources for their respective audiences. The quality of all the products produced is excellent.

Funding.

Fiscal year 1973	$202,875	(Phase I)
Fiscal year 1974	223,071	(Phase I)
	80,375	(Phase II)
Total.	506,321	

Accomplishments. Products developed under this contract include Social Studies Information Unit, Dissemination Casebook, Director to the ALERT Sourcebook. Feasibility of Marketing Programing for Educational R. & D., Use of Innovative Practices, Topoi of Dissemination/Change Tactics, Mathematics Information Unit, and Exploring Teachers' Centers.

Monitoring history.

Dates	Project officer	Activity
November 1972-September 1973	George Carnett	General monitoring.
September 1973-May 1974	Judith Cherrington	General monitoring. 2 trips to NIE by principal investigator. Site visit by NIE staff.
May 1974-August 1975	Mary Harahan	General monitoring. Meeting at FWL. 2 meetings with principal investigator in New York City. August 1975, 3-day site visit.
August 1975-September 1975	Judith Cherrington	General monitoring.

Project STUDY OF THE EFFECTIVENESS OF MARKETING PROGRAMING FOR EDUCATIONAL CHANGE

Objectives and strategies. Research directed toward adaptation of a marketing approach for the field of educational change. The program was to test the effectiveness of a scheme for segmenting educational markets and name and elaborate additional marketing concepts and techniques which offered promise for improving practice in the dissemination and diffusion of educational innovations.

The research objectives were to (1) operationally demonstrate how market segmentation could be used to develop a marketing strategy for selected educational innovations, (2) name and elaborate major marketing concepts that were not currently used in planning educational change and that had a high probability of improving the current state of the art, and (3) draw implications for developing a broader framework for comprehensive planning of education change.

Status. This project began June 30, 1974, and ended December 31, 1975. A final report was submitted to NIE.

Funding. Award made under the Office of Research Grants program in fiscal year 1974. Total amount awarded was $131,486 (fiscal year 1974 funds).

Accomplishments. The study proposed inconclusive findings regarding the specific model being tested. The experiences gained in testing the model were interpreted by the principal investigator in terms of factors which future market-segmentation strategies should take into account. The major accomplishment is a document titled "A Guide to the Use of Market Segmentation for the Dissemination of Educational Innovations."

Monitoring history.

Dates	Project officer	Activity
June 1974-April 1975	Richard Elmendorf	Site visit.
April 1975-December 1975	MacAdams	Meeting with principal investigator.

Project DEVELOPMENT, DISSEMINATION, AND EVALUATION TRAINING SOURCES

Objectives and strategies. An individualized, competence-based professional development program in educational R. & D. developed by the laboratory with the support of NIE and USOE.

The program goal was to develop a transportable, flexible curriculum in educational planning, development, dissemination, and evaluation that would provide resource materials for instructional/learning opportunities in six competence areas: Planning and design, information/data collection and organization, communication skills, developmental engineering, and evaluation and dissemination/marketing. The program was field tested at 14 institutes of higher education and R. & D. agencies.

Status. The contract date began June 30, 1973, and ended September 30, 1975.

Funding. This project received a total of $1,281,601, of which $398,408 was funded by NIE.

Accomplishments. Twenty-two instructional packages which focus on the functional context of work in R. & D., widely used diagnostic competence assessment instruments, and a user guide and catalog of support resources were produced. The program has been widely implemented in the form of preservice or continuing education in academic settings, and utilized by agencies and local and State educational and R. & D. institutions, practitioners, and professionals who wish to develop or upgrade skills.

Monitoring history.

Dates	Project officer	Activity
June 30, 1973- Sept. 30, 1975	Susan Klein, John Egermier	General monitoring.

Table 2. Current non-NIE projects

Program	Objectives and strategies	Status	Funding	Accomplishm
Effects of a Mediated Training Course	The second-year effort is devoted to an investigation of the effectiveness of the course for its designated target audience; i.e., teachers who work with mainstreamed handicapped children. Course effectiveness is defined in terms of two levels of outcomes: Teachers' tutoring proficiency and students' achievement and attitude about mathematics.	This project began July 1, 1974, and is scheduled to end June 30, 1976.	Bureau of Education for the Handicapped, USOE, $256,110.	A course entitled " Mathematics: A Str Mainstreaming" has from minicourse 5: Instruction in Math
Adapting Research to Teaching	The program is an interactive computer-assisted teacher-training system. The goal is to provide technical assistance in demonstrating effective use of the system in training teachers in self-analysis of classroom instruction and provide significant research findings for use in the teaching process.	This project began July 8, 1975, and is scheduled to end Aug. 31, 1976. Follow on work is expected.	This subcontract is funded by the U.S. Office of Education's Teacher Corps. Funding, $125,000.	Program design is c CATTS system is bei on computer. Progr operational by mid-
Implementation of Science and Mathematics Materials	This study of the implementation of nationally planned curriculums in elementary and secondary math, science, and social science is being conducted.	This project began June 27, 1975, and is scheduled to end June 29, 1976.	National Science Foundation, $48,043.	Review of research, interviews with dev disseminators of sp curriculum alternat been completed.
Technical Assistance in Diffusion	The project's objective is to provide social marketing and policy consultation of OE bureaus, and to improve the process of diffusion of validated educational innovations.	This project began July 1, 1975, and is scheduled to end June 30, 1976. Follow on work is expected.	U.S. Office of Education, $478,915.	(1) Publication of Programs That Work, acclaimed and extens publicized catalog approved projects. (

Table 2. Current non-NIE projects

tives and strategies	Status	Funding	Accomplishments
-year effort is devoted stigation of the effec- f the course for its target audience; i.e., ho work with main- andicapped children. ectiveness is defined in wo levels of outcomes: tutoring proficiency and achievement and attitude ematics.	This project began July 1, 1974, and is scheduled to end June 30, 1976.	Bureau of Education for the Handicapped, USOE, $256,110.	A course entitled "Tutoring in Mathematics: A Strategy for Mainstreaming" has been adapted from minicourse 5: Individualized Instruction in Mathematics.
n is an interactive ssisted teacher-training he goal is to provide ssistance in demonstra- tive use of the system teachers in self- classroom instruction significant research or use in the teaching	This project began July 8, 1975, and is scheduled to end Aug. 31, 1976. Follow on work is expected.	This subcontract is funded by the U.S. Office of Education's Teacher Corps. Funding, $125,000.	Program design is completed, CATTS system is being programed on computer. Program will be operational by mid-April.
of the implementation lly planned curriculums ry and secondary math, d social science is cted.	This project began June 27, 1975, and is scheduled to end June 29, 1976.	National Science Foundation, $48,043.	Review of research, plus field interviews with developers and disseminators of specific curriculum alternatives have been completed.
's objective is to ial marketing and policy n of OE bureaus, and to process of diffusion d educational innovations	This project began July 1, 1975, and is scheduled to end June 30, 1976. Follow on work is expected.	U.S. Office of Education, $478,915.	(1) Publication of Educational Programs That Work, a widely acclaimed and extensively publicized catalog of JDRP-approved projects. (2) Production

Program	Objectives and strategies	Status	Funding	Accomplishm
				of a project-inform sound filmstrip (di National Audio-Visu (3) Management of a Regional Education by regions IX and X tion of an NDN mate (6) Production of a book documenting th NDN. (7) Publicati newsletter entitled tional Diffusion." tion and diffusion title I (ESEA) mana for SEA and LEA per (9) Development of center to exhibit J products. (10) Pub "Innovative Educati Volume III." (11) other products and carried out for OE' and Utilization Un Bureau of School Sy for region IX in Sa
Responsive Education Program Follow Through	The current year's effort focused on developing a delivery system—a training approach for adults working with children in the responsive program--geared specifically to program advisers or staff developers, teachers, and teaching assistants (paraprofessionals).	This project began in 1968 and is scheduled to end June 30, 1976. Follow on work is expected.	U.S. Office of Education, $548,472 (7/1/75-6/30/76). Total funds: $3,324,761.	Evaluation reports implementation of t well as program eff continue to be pro

ves and strategies	Status	Fundinn	Accomplishments
			of a project-information package sound filmstrip (distributed by National Audio-Visual Center). (3) Management of a major Western Regional Education Fair sponsored by regions IX and X. (4) Production of an NDN materials inventory. (6) Production of an adoption casebook documenting the successes of NDN. (7) Publication of a monthly newsletter entitled "ED: Educational Diffusion." (8) Organization and diffusion training for title I (ESEA) management training for SEA and LEA personnel. (9) Development of an OE resource center to exhibit JDRP-approved products. (10) Publication of "Innovative Education Practices: Volume III." (11) A host of other products and assignments carried out for OE's Dissemination and Utilization Unit in the Bureau of School Systems and for region IX in San Francisco.
t year's effort focused ing a delivery system— approach for adults th children in the program--geared spe- to program advisers or lopers, teachers, and ssistants (paraprofes-	This project began in 1968 and is scheduled to end June 30, 1976. Follow on work is expected.	U.S. Office of Education, $548,472 (7/1/75-6/30/76). Total funds: $3,324,761.	Evaluation reports regarding the implementation of the program as well as program effectiveness continue to be produced.

Program	Objectives and strategies	Status	Funding	Accomplish
Native American Career Education	Designing, developing, and testing a career-education program for native American youth in grades 7 to 9, the program will integrate academic subjects with career awareness, orientation, and exploration. It expects to provide native American students with an introduction to a broad spectrum of careers and aims to increase their self-awareness and ability to make rational choices about future educational programs, career explorations, and career selection.	This project began July 1, 1974, and is expected to end July 1, 1976.	Curriculum Development Branch, Bureau of Occupational and Adult Education, U.S. Office of Education, $228,562.	The program develo tional units that American students duction to a broad careers.
Cooperative Group Interaction Skills	This project examines the effects of learned cooperative group interaction skills on performance in task-oriented small groups. The project developed competence-based instructional materials to teach CGIS. The overall goal is to prepare students to perform effectively in the kinds of task-oriented, small-group situations which they will encounter in work settings.	This project began June 30, 1974, and is expected to end June 30, 1976.	Bureau of Occupational and Adult Education of the U.S. Office of Education, $126,067.	A classification of tasks has been desi vide a basis for cu design and for unde groups function. A consisting of simul cises, problem-solv for groups, and sup materials (i.e., gu props) designed for school level studen ly being field teste
STRIDE General Assistance Center	Provides technical assistance to desegregation school districts in seven content areas: Staff training, community relations, sex desegregation, curriculum development and revision, administrative modification, needs assessment, and	This project began July 1, 1974, and is scheduled to end June 30, 1976. Follow on work is expected.	U.S. Office of Education, region IX (desegregation of public education), $894,855 (7/1/75-6/30/76).	As of March 1976, S completed a series workshops; a number level miniworkshoos Disseminated product local history handbo proceedings, resourc

s and strategies	Status	Funding	Accomplishments
veloping, and testing ation program for an youth in grades 7 gram will integrate ects with career ientation, and It expects to provide an students with an to a broad spectrum d aims to increase areness and ability nal choices about ional programs, career and career selection.	This project began July 1, 1974, and is expected to end July 1, 1976.	Curriculum Development Branch, Bureau of Occupational and Adult Education, U.S. Office of Education, $228,562.	The program developed 12 instructional units that provide native American students with an introduction to a broad spectrum of careers.
xamines the effects perative group ills on performance ed small groups. veloped competence-ional materials to he overall goal is dents to perform the kinds of task-l-group situations encounter in	This project began June 30, 1974, and is expected to end June 30, 1976.	Bureau of Occupational and Adult Education of the U.S. Office of Education, $126,067.	A classification of learning tasks has been designed to provide a basis for curriculum design and for understanding how groups function. A curriculum consisting of simulation exercises, problem-solving activities for groups, and supportive materials (i.e., guides, manuals, props) designed for secondary school level students is currently being field tested.
cal assistance to chool districts in reas: Staff training, ions, sex desegre-lum development and istrative modifi-ssessment, and	This project began July 1, 1974, and is scheduled to end June 30, 1976. Follow on work is expected.	U.S. Office of Education, region IX (desegregation of public education), $894,855 (7/1/75-6/30/76).	As of March 1976, STRIDE has completed a series of regional workshops; a number of district level miniworkshops are under way. Disseminated products include local history handbook, conference proceedings, resource bulletins,

Program	Objectives and strategies	Status	Funding	Accomplishmen
	student/faculty assignments. Six service representatives, consultants, regional workshops, information service center, product development, and mini-workshops at the local district level.			and four films. Fi representatives are providing technical to more than 80 dis California, Arizona Nevada.
Adult Basic Education Staff Development	The primary function is to provide leadership in (1) planning and coordinating advisory-committee activities; (2) publishing and distributing a newsletter; (3) assisting local ABE programs to organize, arrange, and conduct workshops, classes, and conferences at local sites; (4) subcontracting with San Francisco State University and the University of Hawaii in continual development and field testing of specified competency-based curriculum modules; and (5) serving as a regional clearinghouse for human and material resources, etc.	This project began May 1, 1973, and is scheduled to end July 30, 1976. Follow on work is expected.	SEA's: Arizona . . . . $12,251 California . . 92,026 Hawaii. . . . . 30,520 Nevada. . . . . 9,113 Pacific--American Samoa: Community College. . . . 12,000 Guam Department of Education . 36,109 Trust Territory 26,647	The laboratory cont serve as full-time the coordination of basic education sta development efforts HEW region IX. Sta territories have ex mutual assistance ened staff developm ties. Activities h on dissemination of and services.
Micronesia/ Ponape Teacher Corps Project	The goal of this program is to upgrade basic and professional skills of Micronesian interns, implement a university without walls baccalaureate program in the Pacific Trust Territory, demonstrate a model for teacher training which can be implemented	This project began July 1, 1975, and is expected to end Aug. 1, 1976.	U.S. Office of Education's Teacher Corps/Peace Corps Trust Territory of the Pacific Islands funding, $213,072. Subcontract to FWL: $87,106.	Directory of Learni is completed and ha distributed to scho community. Followu on use of the direc progress. Interns pleted an assessmen schools using the

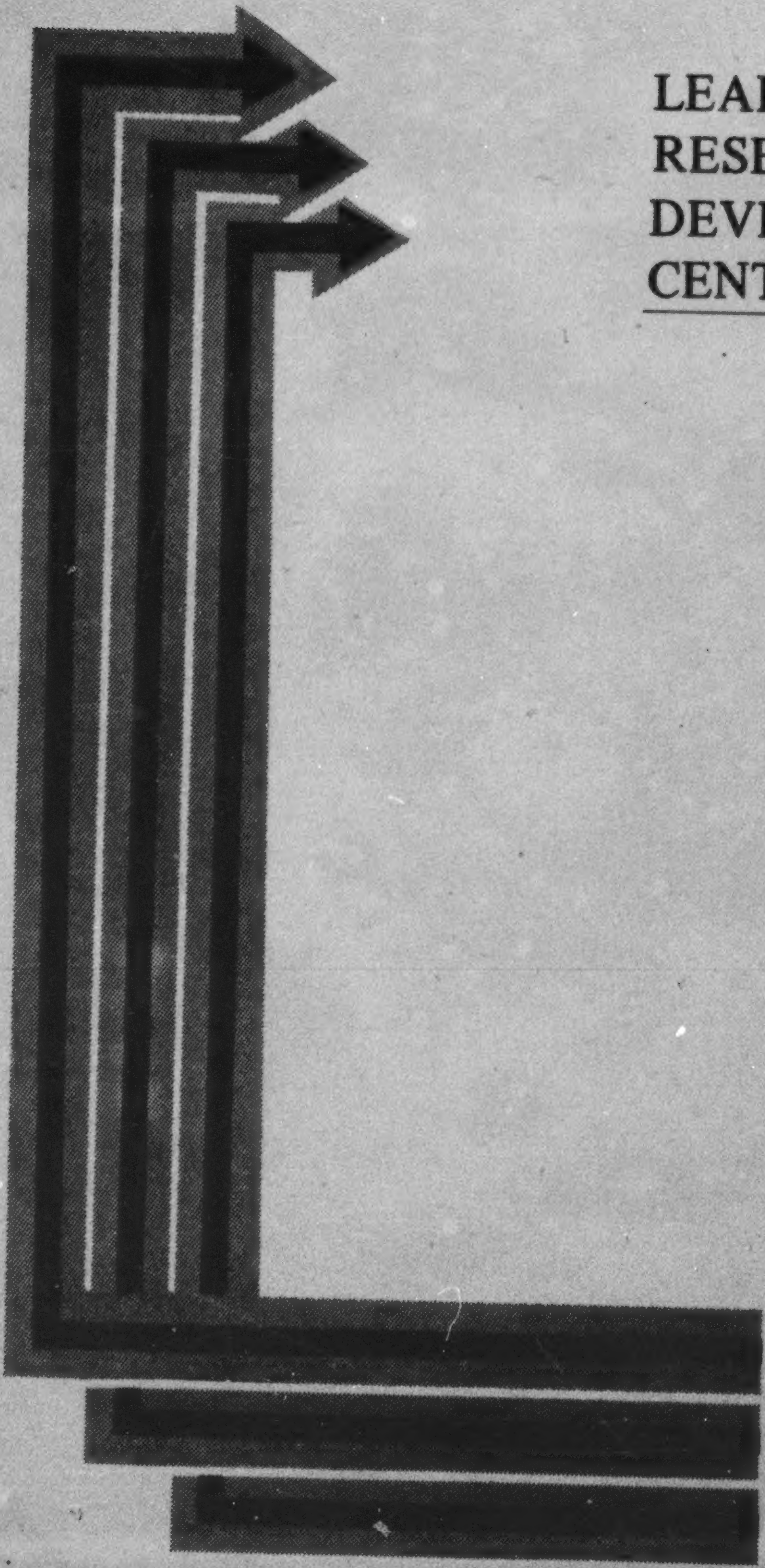
es and strategies	Status	Funding	Accomplishments
ty assignments. Six sentatives, consult- l workshops, ervice center, opment, and mini- the local district			and four films. Field-service representatives are currently providing technical assistance to more than 80 districts in California, Arizona, and Nevada.
unction is to provide (1) planning and dvisory-committee 2) publishing and a newsletter; (3) l ABE programs to nge, and conduct sses, and conferences ; (4) subcontracting cisco State University rsity of Hawaii in lopment and field cified competency- um modules; and a regional for human and rces, etc.	This project began May 1, 1973, and is scheduled to end July 30, 1976. Follow on work is expected.	SEA's: Arizona . . . . $12,251 California . . 92,026 Hawaii. . . . . 30,520 Nevada. . . . . 9,113 Pacific--American Samoa: Community College. . . . 12,000 Guam Department of Education . 36,109 Trust Territory 26,647	The laboratory continues to serve as full-time base for the coordination of adult basic education staff development efforts throughout HEW region IX. States and territories have exchanged mutual assistance and strengthened staff development activities. Activities have focused on dissemination of products and services.
is program is to and professional onesian interns, iversity without reate program in ust Territory, model for teacher can be implemented	This project began July 1, 1975, and is expected to end Aug. 1, 1976.	U.S. Office of Education's Teacher Corps/Peace Corps Trust Territory of the Pacific Islands funding, $213,072. Subcontract to FWL: $87,106.	Directory of Learning Resources is completed and has been distributed to schools and community. Followup evaluation on use of the directory is in progress. Interns have completed an assessment of minischools using the concerns-

Program	Objectives and strategies	Status	Funding	Accomplishme
	in other parts of Micronesia, utilize and support the teacher education programs at the Community College of Micronesia, and develop culturally relevant teacher-training curriculum materials.			based adaption mo development on the program has begun.
Process of Educating Adults in Reading-Language	The program is designed to apply to perspective of whole language reclaiming functionally illiterate adults to use of reading and writing skills. Program will be implemented at demonstration sites to train teachers and tutors in reading instruction; test and revise a writing sample diagnostic procedure; and develop training handbooks, guides, and other materials as required.	This project began Aug. 1, 1975, and is expected to end Aug. 31, 1976.	California State Department of Education, $46,354.	The project has do successful applica psycholinguistic p to adult reading i heretofore only do children. The pro implemented in ele adult basic-educat Handbooks are bein to disseminate the process used with well as the instru students.
Head Start Supplementary Training and Child Development Associate Training	Major goals are (1) to promote career development and degree acceleration for Head Start and State preschool employees; and (2) to promote relevant college-based courses which will maximally impact the competencies of preschool employees. This second goal involves building a statewide dissemination network to achieve conversion of California community college child development and early childhood education	This project began Jan. 27, 1976, and is scheduled to end Aug. 31, 1976. Follow on work is expected.	(Agency) $171,320.	Major accomplishme the first 60 days o operation include t The introduction o to expand the State career-incentive pr include other secto California State-f school/day-care pro development of a ne linking community c innovative 4-year c child development c

tives and strategies	Status	Funding	Accomplishments
rts of Micronesia, support the teacher rograms at the ollege of Micronesia, culturally relevant ining curriculum			based adaption model and development on the instructional program has begun.
is designed to apply ive of whole language unctionally illiterate e of reading and lls. Program will ed at demonstration in teachers and tutors nstruction; test and ting sample diagnostic nd develop training uides, and other required.	This project began Aug. 1, 1975, and is expected to end Aug. 31, 1976.	California State Department of Education, $46,354.	The project has documented the successful application of psycholinguistic principles to adult reading instruction, heretofore only documented with children. The program has been implemented in eleven Bay Area adult basic-education classrooms. Handbooks are being produced to disseminate the training process used with teachers as well as the instruction of students.
are (1) to promote opment and degree for Head Start and ool employees; and te relevant college- s which will maximally ompetencies of pre- yees. This second goal lding a statewide n network to achieve f California community d development and ood education	This project began Jan. 27, 1976, and is scheduled to end Aug. 31, 1976. Follow on work is expected.	(Agency) $171,320.	Major accomplishments during the first 60 days of contract operation include the following: The introduction of legislation to expand the State preschool career-incentive program to include other sectors of California State-funded preschool/day-care programs; and development of a network system linking community colleges, innovative 4-year colleges, child development center-based

Program	Objectives and strategies	Status	Funding	Accomplishmen
	departments to child development associate "professional" preparation programs which are competency based. Connected with this effort is the project objective of joining State "acceptance" of the CDA credential through recognition of a specified career ladder defined by way of competency levels and related to the performance standards of Head Start and State preschool programs.			programs, five cente assembly postsecondar subcommittee, the Of Child Development (HE State department of a coordinated effort child-development as training and credent The startup of clust community-college-ba training models throu State.

ves and strategies	Status	Fundino	Accomplishments
to child development rofessional" prepara- s which are competency ected with this effort ct objective of e "acceptance" of the ial through recognition ed career ladder ay of competency levels to the performance Head Start and State ograms.			programs, five centers, the State assembly postsecondary education subcommittee, the Office of Child Development (HEW), and the State department of education in a coordinated effort to implement child-development associate training and credential system. The startup of clusters of community-college-based CDA training models throughout the State.



LEARNING RESEARCH AND DEVELOPMENT CENTER

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LEARNING RESEARCH AND DEVELOPMENT CENTER

Mission

The Learning Research and Development Center was established at the University of Pittsburgh in 1964 with the aim of bringing the research findings of behavioral science to bear on improving practice in the Nation's schools. Conceived as a special type of academic institution, the center was organized in such a way as to maximize the fruitful interaction between scholarship in the behavioral sciences and educational practice.

From its inception, the special mission of the center has been to develop, study, and evaluate adaptive environments for the education of children from 3 to 12. Adaptive environments are intended to respond to individual differences among children in two ways: First, they provide alternative modes of instruction that take into account the nature and extent of abilities of each child. Second, they provide direct instruction in the basic skills, so that individual children are more able to profit from the later instructional opportunities which the school makes available. LRDC approaches this mission from several perspectives. A strong program of research on cognitive processes—especially those tapped in reading comprehension and learning-to-learn skills—has been shaped by questions and problems of instruction and is geared to improving proficiency in these processes. Educational products and programs are developed and then studied for their effects on social as well as academic outcomes of schooling. Through direct work in the schools, the center is seeking optimal patterns for implementing and integrating components of ots products and programs into a comprehensive adaptive learning environment.

At the present time, four major themes characterize the center's work: (1) Designing new environments for learning, (2) instructional experimentation on basic skills, (3) evaluation of educational interventions, and (4) interaction between the problems of education and the underlying research disciplines. Each of these areas is described briefly below.

LRDC's activities, carried out in conjunction with several school systems, have converged on the design of innovative learning environments. The products of four major curriculum efforts—in reading, science, mathematics, and early learning—are now ready for implementation as components of such environments. Further, systems for flexible use of these programs within an adaptive classroom and methods for studying classroom processes in such flexible environments have been developed.

This puts LRDC in a position to focus more sharply on the study of the classroom environment and the implementation of school change, and to disseminate, by example, certain concepts of educational practice.

LRDC's curriculum development and instructional research efforts have been particularly oriented toward the basic skills of elementary school education. Using individualized programs that are in final stages of completion and field testing, instructional experimentation is carried out to understand why and under what conditions certain instructional practices and curriculum designs are effective. Ongoing research is designed to understand the fundamental communication and language skills and basic aptitudes and cognitive abilities upon which learning depends in subject-matter areas. Instructional experimentation is being conducted to investigate the conditions that contribute to acquisition of these skills and to their enhancement in the school-age child.

During the past 3 years, considerable effort has been devoted to developing an evaluation method for assessing the effectiveness of educational programs. This work has resulted in a multivariate evaluation model that considers the combined effects of differences in student characteristics and differences in the implementation of particular programs upon school outcomes. This model is now ready for application with a wide range of educational innovations. A complementary line of research in the evaluation area focuses on detailed analysis of curriculums and instructional events in terms of the extent to which they conform to established principles of learning and teaching.

The interactive character of basic research and educational applications permeates all areas of emphasis in the center's work. On the basis of its instructionally oriented research on cognitive abilities, memory and linguistic processes, and psychological development, LRDC has become a recognized leader in the conduct of investigations that emphasize the interaction of problems of education with psychological theory and research. The organization of LRDC is specially designed for, and center personnel are particularly expert in, fostering this interaction. This insures that the center's focused research on the basic skills of elementary education remains relevant both to practical educational needs and to current research findings and theory.

Over the past 12 years, LRDC has attracted an outstanding group of research associates and supporting staff. A multidisciplinary group, the staff includes a number of cognitive, developmental, and experimental psychologists, in addition to education researchers, curriculum designers, and educational supervisors and implementers, many of whom are experienced classroom teachers. Sociologists, social psychologists, computer programers, and materials-production specialists further reflect the diversity of interests and talents that make up the center's human resources.

A very important aspect of LRDC has been its early and continuing involvement with the schools. Since the mid 1960's, the center has had a close working relationship with a suburban school and an inner-city school. This permitted curriculums under development to be used with children in actual classroom situations as a means of providing early feedback to developers on the effectiveness of instructional materials and sequencing. This relationship also developed extensive experiences and procedures for "formative evaluation," as distinct from evaluation of completed programs. In addition, LRDC has cooperated with a number of field-test schools within which testing of prototype programs can be carried out prior to large-scale dissemination. Recently LRDC has established a demonstration classroom (K-2) in its building, providing a unique opportunity to study adaptive environments and student learning at close range in a controlled setting.

The products of LRDC's multidisciplinary research and development effort are disseminated in several forms. Curriculum products are used in schools across the country, according to arrangements made with commercial publishers' agencies or in some cases through the national Follow Through program. Research findings are shared with other researchers and educators at professional meetings and by means of numerous journal publications and books. In addition, the center sponsors its own publication series, through which worthy research reports are made available to persons requesting information about center activities. The center has hosted a number of conferences to which noted scholars have been invited to present their research and their views concerning such nationally important issues as reading, and current problems in psychological research. The center views itself and has become nationally and internationally recognized as a model of education R. & D. that can guide other similar efforts to improve educational practice and refine our understanding of the educational process.

Over the next 5 years, the sustained focus of LRDC will continue to be its dual and integrated objectives of (1) improving elementary education through the development and assessment of new programs that are implemented directly in cooperation with schools, and (2) work at the frontiers of knowledge in order to lay the groundwork for solving the problems and meeting the educational challenges of the future. The center will continue to work with schools on the reform of educational content and practice. It will continue to provide new tools, techniques, procedures, and patterns of organization to extend the resources of teachers. New techniques of field research for determining what does and does not work in educational practice will be developed. Finally, LRDC will seek to generate and concentrate new knowledge and theory concerning human behavior as it bears on developing intellectual and social competence.

Governance

As a multidisciplinary R. & D. center, LRDC reports directly to the provost of the university, rather than to a particular school or college. This permits direct relationships between the center and all relevant areas of the university.

The provost is advised with respect to LRDC by an internal university coordinating committee and an external board of visitors. The university coordinating committee was established in 1967 to review and make recommendations regarding the relationship between LRDC and various schools and departments within the University of Pittsburgh. This committee is concerned with such matters as the flow of faculty members between their respective departments and the center as departmental needs, center needs, and individual interests change. It has established the LRDC Fellows program for university faculty and it oversees the development of personnel policies involving graduate students who assist in the center's R. & D. work. The committee is chaired by the university provost. Its members include the deans of the school of education and the faculty of arts and sciences; the vice chancellors for operations, planning and budget, and public affairs; and other individuals closely associated with the work of the center.

The work of LRDC is conducted under the scrutiny of its board of visitors. This is a group of distinguished scholars who visit the center annually to review intensively its accomplishments and plans and to give substantive advice relevant to those R. & D. activities they see as important to conduct.

Management

The center codirectors, William Cooley and Robert Glaser, report directly to the university provost, Rhoten Smith. Lauren Resnick, the associate director of LRDC, works directly with the codirectors in their management and planning functions. Additional input regarding the center's activities comes from two advisory groups described in the previous section, the university coordinating committee and the board of visitors.

The center's substantive R. & D. work units are supervised by the center codirectors and the associate director. These three people meet weekly to review ongoing and planned activities and to coordinate their administrative responsibilities. The codirectors perform the additional function of insuring that three additional units, R. & D. support services, computer-support services, and school programs, provide the services and facilities needed for the R. & D. work to proceed in the varied settings in which it is conducted.

The LRDC executive committee establishes general center policy and conducts annual reviews of the accomplishments and plans of all center research associates. This committee, which meets monthly, consists of the center directors, the individuals in charge of the three R. & D. support units, and four elected research associates.

Staff

The LRDC staff consists of 29 faculty members, 87 professionals (research associates having no contractual obligations with university departments other than LRDC), 68 support professionals, 34 clerical staff, and 25 graduate students. Of the 164-member staff, 53 hold bachelor's degrees, 22 master's degrees, and 36 doctoral degrees. The faculty members on the staff are affiliated with the faculty of arts and sciences (learning and developmental psychology, social psychology, sociology) and the school of education (educational studies, teacher development, specialized professional development).

Staff Development

Because the center provides an environment in which individuals from various disciplines are able to serve as active colleagues, the experience of participating in its activities serves as a unique career-development opportunity. The majority of the center's research associates hold a joint appointment with a department in the university's faculty of arts and sciences or the school of education. They thus maintain active involvement in their base disciplines and in their training activities, but bring these complementary perspectives to bear on their LRDC work and the work of other center research associates.

The center's staff development efforts follow an apprenticeship model. As members mature in their work, they are given increasingly more complex tasks and allowed to work more independently, in line with their growing skill and competence. In addition, these staff members participate in project-wide and cross-project meetings at various levels of the R. & D. process, enabling them to gain a broad base of professional experience.

Finally, LRDC staff participate in the many center-sponsored colloquia, seminars, and state-of-the-art talks, which provide multidisciplinary training through exposure to the unique interests, perspectives, and findings of many fields related to educational R. & D. A visiting-scholars program, through which eminent scholars from this country and abroad spend varying amounts of time at LRDC, provides an additional opportunity for members of the center to keep abreast of related work in education and other disciplines.

Training Provided to Others

Over 300,000 students are using LRDC-developed instructional programs. Five programs are commercially available, and three new programs are being completed and field tested. To insure quality implementation and dissemination of center-developed products and procedures, LRDC conducts numerous inservice training programs and seminars for school personnel. During the past year, workshops and seminars have been held for school superintendents, principals, teachers, administrators, and educational specialists. Subjects ranged from the implementation of specific curriculum components and procedures for individualization to the development of cooperative networks for disseminating products of educational R. & D. In addition to offering onsite training programs, the center has developed a number of self-instructional programs for school personnel and educational developers.

The center conducts training programs for individuals preparing for careers in research and development and pursuing advanced degrees in the university. For example, a multidisciplinary graduate research training program taught 19 graduate students from the social sciences how to use and understand the concepts and research of several disciplines and to apply their knowledge to research problems in education. Another program, initiated by a consortium of educational agencies, trained 47 educational specialists, some in curriculum design and others in implementing school change.

A major current training activity involves providing graduate student assistantships and predoctoral and postdoctoral and faculty fellowships to individuals from the University of Pittsburgh as well as other universities. The graduate student assistant and fellow program is coordinated by a committee of center faculty members to insure that the experiences provided at LRDC contribute to the individuals' discipline-oriented work and increase their awareness of how their discipline can contribute to the solution of educational problems. Since 1964, over 150 individuals have been supported under these programs. They have come from more than a dozen different departments and a wide variety of fields--psychology, education, anthropology, sociology, engineering, geography, speech, social work, and child development. Currently, the program supports 26 graduate students, 2 postdoctoral fellows, and 1 visiting scholar.

Institutional Relationships

LRDC maintains close working relationships with a number of schools and school systems. At the local level, the center has been associated with several developmental schools in the Pittsburgh area since 1964. At present, LRDC instructional programs in reading, mathematics, science, and early learning environments are being tried out and studied in 12 local schools. By doing developmental work in schools, for schools, and with schools, the center designs educational products and practices that not only meet high standards for psychological and instructional soundness, but are also practical because they have been developed in the kind of setting in which they will be used.

More geographically remote from the center is a network of field-test schools (currently 22 schools in 7 different districts), where effects of new programs are assessed in the context of school operations that do not have the full range of extra staff and support services provided at local sites. These field-test schools serve as sites for testing program effectiveness in typical school settings and for identifying the variables that are important to consider in any educational assessment effort.

Beyond these schools, innovative programs developed by LRDC are disseminated through State departments of education, regiona organizations serving several States, and commercial publishers. From time to time, working relations are formed with publishers and other educational R. & D. agencies for the purpose of specific joint research, development, field test, or dissemination activities. Recently, the center has begun working with the Pennsylvania Department of Education on the planning of a joint effort to improve statewide schooling which could serve as a model to other States. A consortium of agencies has been established to help local schools solve specific problems identified through Pennsylvania's Educational Quality Assessment program.

Facilities

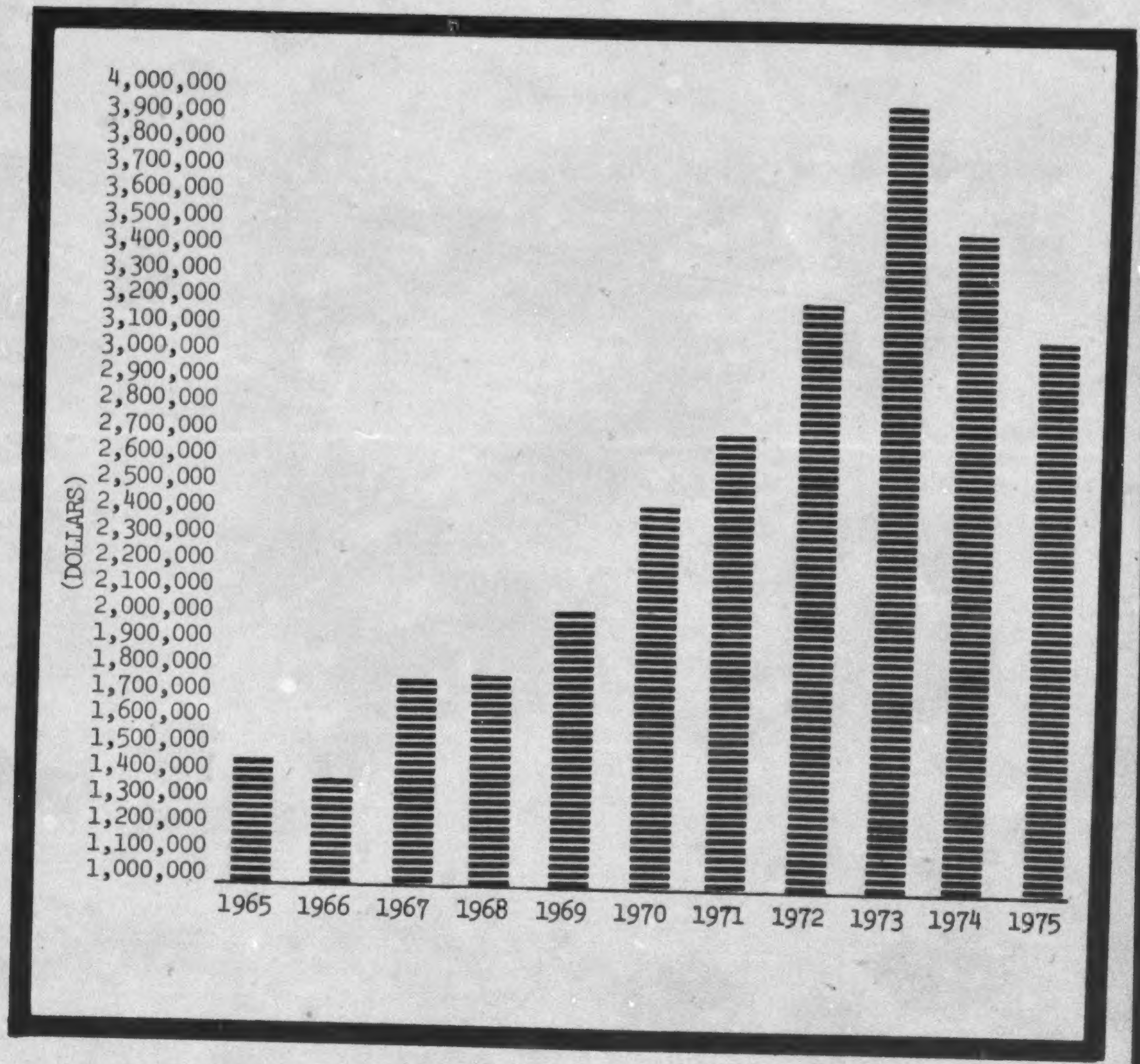
The LRDC Building, located on the campus of the University of Pittsburgh, was completed in spring of 1974 at a cost of approximately $8 million, funded jointly by the USOE and the university. The nine-story building contains 52,000 net square feet and provides office space for the entire center staff, conference rooms, and special facilities important to the accomplishment of the center mission.

Specially designed demonstration classrooms, a major focus of the center, provide a site for intensive study of LRDC's newly developed programs and procedures. These classrooms are designed to allow a variety of instructional activities which can be monitored, without disturbing classroom activities, from observation areas through two-way mirrors and a specially designed audio system.

Twenty-six laboratories are available where staff can carry out experiments generated from psychological research and from instructional development related to the center's work in the schools. The center operates a medium-sized computer and related support facilities (terminal room, interface lab, electronics shop). For research purposes, the computer is linked to equipment in nearby schools.

An audiovisual lab, including recording studios, film-development labs, and cassette production and duplication equipment, is available for many center uses. Newly developed materials for instruction--games for teaching reading, testing materials, science kits, and other prototype materials--are constructed in a materials-production facility which includes a graphic-arts section; metal, paint, and wood shops; and a small reproduction and copy center.

Table 1. Funding history



A 64-seat lecture room, featuring both front and rear projection areas for films, slides, and TV, is used primarily for presentations concerning center-related work. An information center containing special publications and materials pertinent to educational R. & D. is located adjacent to this auditorium. The topmost floor contains a large open space for formal and informal meetings of center staff and visitors.

CURRENT NIE PROJECTS

Project CURRICULUM COMPLETION ACTIVITIES

Objectives and strategies. This project consists of three components, described below:

(1) New Reading System (NRS) is an individualized adaptive system for teaching the reading skills traditionally included in grades K-3. NRS is individualized in that it permits children to progress at different rates through its 14 levels; it is adaptive in that alternative teaching strategies which meet the needs of different children are built into the system. The content and sequencing of instruction are derived from careful analysis of the reading process on the basis of which a testable model of that process has been outlined. Special features include procedures to encourage self-management, games which facilitate social interaction during learning, and cassette tapes which present the concepts found in NRS written materials.

(2) Individualized Science (IS) is a basal science program intended for use in grades K-8. The program is designed to enable the child to acquire a foundation of scientific literacy; to be skillful in using the processes of scientific inquiry and to be able to carry out inquiries; to display positive attitudes toward his (her) study of science and scientific inquiry and to display an informed attitude toward the scientific enterprise; to view the learning process as primarily self-directed and self-initiated; and to play a major role in evaluating the quality, extent, and rapidity of his (her) learning. Its subject matter is general science, with emphasis on

concepts from human physiology, physical and biological systems, interactions of science and society, and the processes of scientific inquiry. The program also provides the child with science experiences designed to develop, by means of a child's active involvement, a comprehensive view of the scientific enterprise. Instruction is individualized so that each child can derive maximum benefit from his or her experience in science.

(3) The design and implementation of the Individualized Mathematics (IM) program, started in 1970, is one of the major development efforts of LRDC in the area of mathematics instruction. By 1973, this work had resulted in the development of a prototype mathematics curriculum, for use in kindergarten through the third grade, organized into 45 units. In essence, the IM program involved an integration of ideas from the two earlier LRDC mathematics programs, IPI Math and PEP Quantification, into an instructional system involving both paper-and-pencil lessons and manipulative activities. The unique features of this curriculum were the use of a hierarchical structuring of units and objectives in a manner which facilitated individualizing pupil paths through the program, and provision for the systematic use of manipulative activities in a form which permitted extensive reliance upon independent study. The mathematical content of the program is based on the School Mathematics Study Group's (SMSG) curriculum planning.

Status. Development of all three programs is complete and all are being tried out in the schools affiliated with LRDC. Individualized Science and Individualized Mathematics have both been picked up by publishers, and LRDC plans no more work on these two programs after November 30, 1976. A publisher for the New Reading Series will be found by fall 1976 and all work will be completed by November 30, 1977.

Funding.

NRS:

Fiscal year 1972	$153,900
Fiscal year 1973	162,300
Fiscal year 1974	240,200
Fiscal year 1975	266,900
Fiscal year 1976	162,400

IS:

Fiscal year 1972	$62,100
Fiscal year 1973	88,500
Fiscal year 1974	127,100
Fiscal year 1975	186,500
Fiscal year 1976	79,000

IM:

Fiscal year 1972	118,200
Fiscal year 1973	72,400
Fiscal year 1974	64,700
Fiscal year 1975	63,300
Fiscal year 1976	65,000
Total	1,912,500

Accomplishments. Development of the three curriculum products is almost entirely complete. Publishers have been secured for Individualized Mathematics and Individualized Science. LRDC expects to secure a publisher for the New Reading Series by fall 1976. A large number of research articles and technical papers, all available from LRDC, have been generated in the course of developing the three products.

Monitoring history.

Dates	Project officer	Activities
November 1972-73	Robert Chesley	Periodic phone calls and correspondence.
November 1973-June 1974	Dick Harbeck	January 1974, site visit with Tom Glennan. May 1974, site visit with Gary McDaniels.
June 1974-October 1975	Joy Frechtling	July 1974, site visit with Mike Smith. February 1975, site visit with Arthur Wise.
September 1975 to present	Jackie Jenkins, Monte Penney	March 1976, program review and evaluation, consultants, Ron Leslie and Jim Johnson.

Project ADAPTIVE EDUCATION PROGRAM

Objectives and strategies. Current work in Adaptive Education program is organized in four work units: Communication and Language, Basic Learning Skills, Learning Environments, and Measurement and Evaluation.

The Communication and Language unit has recently completed development of the New Reading System and has now turned its attention to research on comprehension. Two strategies guide the research: Attempting to determine process differences between better and poorer comprehenders; and analysis of the skills involved in comprehension. Topics under study include the relationship of word recognition to comprehension, the effects of increasing decoding speed, comprehension of connected discourse, and integration of new knowledge with previously acquired knowledge.

The Basic Learning Skills unit is conducting research on the cognitive processes that underlie individual performance on tests of intelligence and aptitude. As in the comprehension research, LRDC employs both contrastive (good versus poor performers) and task analytic strategies. The current contrastive studies on intelligence test and aptitude test performance examine speed of perceptual processes, organization of semantic memory, and attention. Studies focus upon the processes involved in solving analogies (as in the Miller Analogies Test) and letter series items (such as "ABMDCOME ___ ___"). Other experiments, using tasks from elementary school geography, mathematics, and science, attempt to teach children the problem-solving skills that are identified and analyzed through the basic research.

The Learning Environments unit is concerned with moving LRDC's Adaptive Education program into the schools. Research is being conducted to determine optimal ways of using LRDC curriculums to fit the requirements of the local population. The Self-Schedule System, which allows children to schedule many of their learning activities, provides a research setting for LRDC's studies of teachers' and children's use of time. Other research considers the effect of teacher characteristics upon children's willingness to delay gratification in lengthy learning situations.

The Measurement and Evaluation unit attempts to measure the educational outcomes of the products of the Adaptive Education program; to assess the theoretical validity of the instructional procedures and materials, and to develop improved evaluation methods. The field test of the New Reading System is scheduled to begin in fiscal year 1977. LRDC continues to develop and refine an evaluation model that is to be used at the classroom level, as opposed to the school level used by Coleman and most other evaluators. The LRDC model is one selected by the Compensatory Education Study for evaluation of individualized education.

Status. Work in learning research and instructional experimentation will lead to the design of new approaches to teaching and other interventions.

Funding.

AE:

Fiscal year 1972	$1,879,900
Fiscal year 1973	2,086,700
Fiscal year 1974	2,555,600
Fiscal year 1975	2,258,000
Fiscal year 1976	1,986,200
Total.	10,766,400

Accomplishments. LRDC staff have published hundreds of research articles and technical reports during their work on the Adaptive Education Program. These, and the reports of the LRDC conference series, are all available from LRDC.

Monitoring history.

Dates	Project officer	Activities
November 1972-73	Robert Chesley	Periodic phone calls and correspondence.
November 1973-June 1974	Dick Harbeck	January 1974, site visit with Tom Glennan. May 1974, site visit with Gary McDaniels.
June 1974-October 1975	Joy Frechtling	July 1974, site visit with Mike Smith. February 1975, site visit with Arthur Wise.

Dates	Project officer	Activities
September 1975 to present	Monte Penney, Jackie Jenkins	March 1976, program review and evaluation, consultants Dr. Ron Leslie, Dr. Jim Johnson.

COMPLETED OR TERMINATED NIE PROJECTS

Project

DESIGN FOR A STUDY OF THE EFFECTIVENESS OF INDIVIDUALIZED INSTRUCTION IN READING AND MATHEMATICS

Objectives and strategies. As part of NIE's compensatory-education study LRDC was awarded a contract to develop a design for the evaluation of individualized instruction in reading and mathematics, the design built on Cooley and Lohnes modification of the Carroll model of learning.

Status. The project was completed in October 1975. A panel of outside reviewers selected LRDC design for implementation.

Project

RESEARCHER TRAINING PROGRAM

Objectives and strategies. As part of NCERD's Researcher Training program at USOE, the LRDC consortia was established in fiscal year 1971. The Research and Development Training project was initiated by a consortium of educational agencies that had identified a common need for the training of educational specialists in the area of curriculum design and local educational change. After a year of operation, the programmatic activities of the project were reviewed and the educational personnel needs evaluated. As a result of the review, two separate training programs were initiated: The Curriculum Design and Local Change program and the Multi-Disciplinary Graduate Research and Development Training program.

Status. The project was concluded in 1974. The materials produced were planned to be of wide use in school systems, State education departments, schools of education, and various educational R. & D. agencies. Two books have been published from this effort.

Project PERCEPTUAL SKILLS CURRICULUM PROJECT

Objectives and strategies. The Perceptual Skills Curriculum is made up of four components: Visual-motor skills, auditory-motor skills, general motor skills, and letters and numerals. The curriculum consists of materials and lessons designed to aid the teacher in teaching the above skills through instructional tapes and worksheets. The curriculum alerts the teacher to each student's competencies and needs. The curriculum components are structured into levels of behaviors described as objectives, and tests are provided for each objective. The child is tested for his or her ability to demonstrate mastery at each level.

Status. The Perceptual Skills project was completed in 1972 and is being used in 2,000 schools.

Table 1. Current non-NIE projects

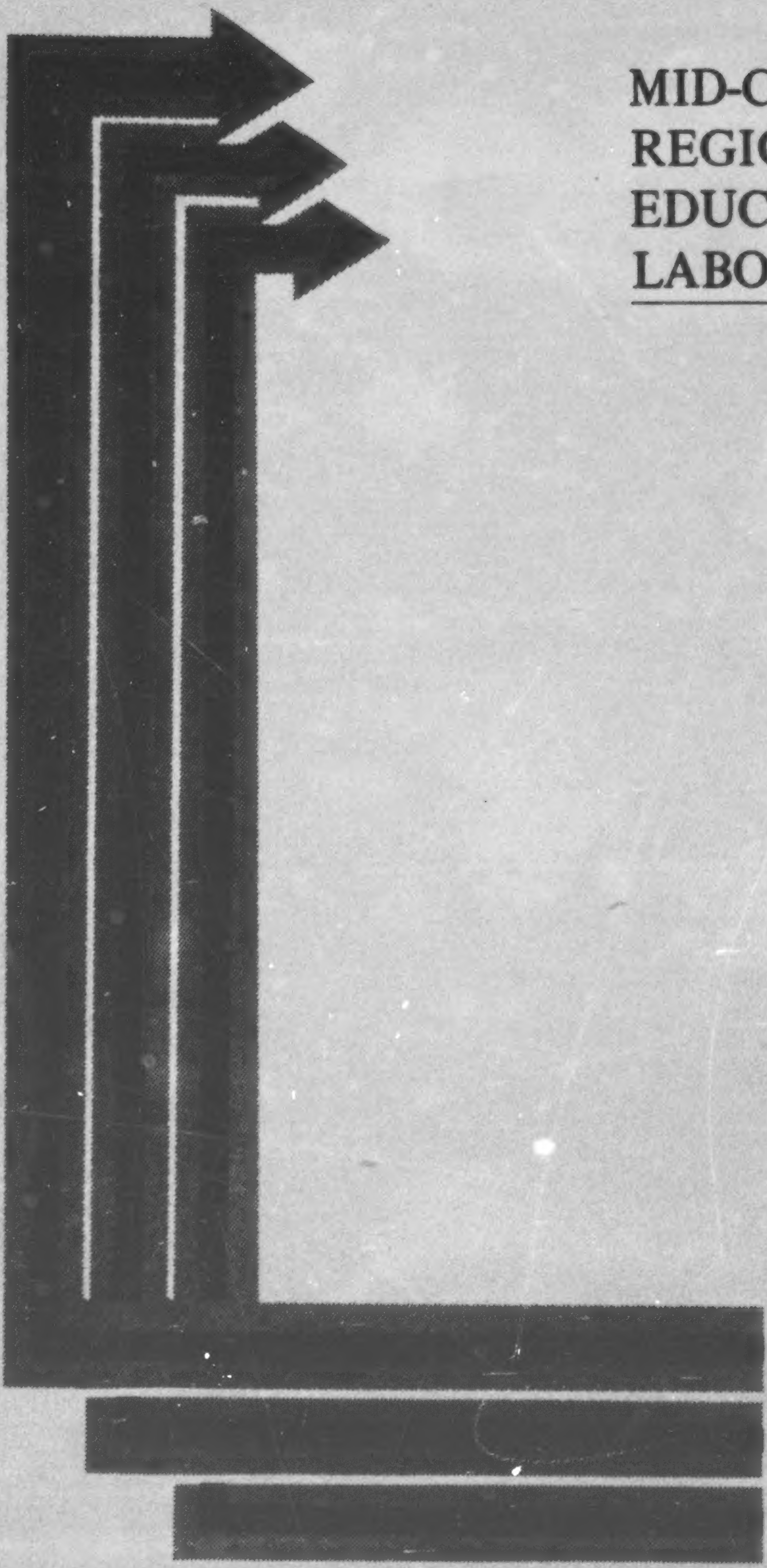
Project	Objectives and strategies	Status	Funding	Accomplishme
Follow Through Project	LRDC has served as 1 of 22 sponsors in the national Follow Through program since 1968. Follow Through (FT) identified LRDC as a sponsor of an individualized approach to education; LRDC agreed to participate because of its commitment to work with schools to demonstrate and evaluate the feasibility and effectiveness of individualizing instruction. Currently, the LRDC Follow Through instructional program is implemented in seven widely scattered and highly diverse school systems. These seven sites are Randolph County, W.Va.; Keystone Central, Pa.; Montevideo, Minn.; Akron, Ohio; Texarkana, Ark.; Belcourt, N. Dak.; and Waterloo, Iowa.	Since 1972, plans for phasing out the FT program have been considered annually by the Federal Government. Although the future status of FT remains unclear, LRDC has been working with the seven sites to smooth the possible transition to locally supported use of major portions of the LRDC programs. This involves certain adaptations of the programs and development of training and support packages that will allow local staff to operate independently. In addition, LRDC continues to assess the impact of FT on students, school teachers and administrators, and communities, and to investigate instructional processes of the LRDC Follow Through model and their effects on schooling outcomes. It appears likely that the FT program will be modified in 1976-77 and the sponsors may be dropped in 1977-78. The enabling legislation is presently under consideration.	1972 Direct funds..$311,400 Institutional support..... 115,300 1973 Direct funds.. 368,400 Institutional support..... 96,100 1974 Direct funds.. 350,100 Institutional support..... 104,500 1975 Direct funds.. 330,100 Institutional support..... 83,700 1976 Direct funds.. 318,000 Institutional support..... 76,400 Total Direct funds.1,678,000 Institutional support......476,000	There have been a nu fic outcomes related FT objectives: Accor ject data collected the Stanford Researc the LRDC model has b ed at the FT sites c the intent of the de of the LRDC model is ed to classrooms out program on the initi sites. Student-achi collected by the LRD cate that there has all positive effect math scores, especia K-2. Using FT class large part of their searchers at LRDC ha and used a framework cally validating the materials and proced to the instructional Finally, the FT expe been documented as a the implementation o innovations. The FT experience ha to an improved unders the many variables th structional quality learning, and has le velopment of staff c needed to address the These capabilities i

Table 1. Current non-NIE projects

s and strategies	Status	Funding	Accomplishments
ed as 1 of 22 spon- ational Follow Through 1968. Follow Through ed LRDC as a sponsor ualized approach to DC agreed to partici- of its commitment to ools to demonstrate the feasibility and of individualizing Currently, the LRDC h instructional pro- mented in seven widely highly diverse school se seven sites are ty, W.Va.; Keystone Montevideo, Minn.; Texarkana, Ark.; Dak.; and Waterloo,	Since 1972, plans for phasing out the FT program have been considered annually by the Federal Government. Although the future status of FT remains unclear, LRDC has been working with the seven sites to smooth the possible transition to locally supported use of major portions of the LRDC programs. This involves certain adaptations of the programs and development of training and support packages that will allow local staff to operate independently. In addition, LRDC continues to assess the impact of FT on students, school teachers and administrators, and communities, and to investigate instructional processes of the LRDC Follow Through model and their effects on schooling outcomes. It appears likely that the FT program will be modified in 1976-77 and the sponsors may be dropped in 1977-78. The enabling legislation is presently under consideration.	1972 Direct funds..$311,400 Institutional support..... 115,300 1973 Direct funds.. 368,400 Institutional support..... 96,100 1974 Direct funds.. 350,100 Institutional support..... 104,500 1975 Direct funds.. 330,100 Institutional support..... 83,700 1976 Direct funds.. 318,000 Institutional support..... 76,400 Total Direct funds.1,678,000 Institutional support......476,000	There have been a number of specific outcomes related to the LRDC-FT objectives: According to project data collected by LRDC and the Stanford Research Institute, the LRDC model has been implemented at the FT sites consistent with the intent of the developers. Use of the LRDC model is being extended to classrooms outside the FT program on the initiative of local sites. Student-achievement data collected by the LRDC staff indicate that there has been an overall positive effect on reading and math scores, especially in grades K-2. Using FT classrooms as a large part of their data base, researchers at LRDC have developed and used a framework for empirically validating the educational materials and procedures central to the instructional model. Finally, the FT experience has been documented as a case study of the implementation of educational innovations. The FT experience has contributed to an improved understanding of the many variables that affect instructional quality and children's learning, and has led to the development of staff capabilities needed to address these variables. These capabilities include (1)

Project	Objectives and strategies	Status	Funding	Accomplishm
				forming and maintaini beneficial relationshi lic and private eleme (2) developing and mo structional materials dures in regular func rooms; (3) developing procedures and models ing instructional pro skills in training lo sonnel, disseminating menting instructional and institutionalizin These capabilities ar all research, develop semination, and evalu cation and therefore substantially to the of LRDC's overall mis

s and strategies	Status	Funding	Accomplishments
			forming and maintaining mutually beneficial relationships with public and private elementary schools; (2) developing and modifying instructional materials and procedures in regular functioning classrooms; (3) developing validation procedures and models for evaluating instructional programs; and (4) skills in training local site personnel, disseminating and implementing instructional innovations, and institutionalizing change. These capabilities are central to all research, development, dissemination, and evaluation in education and therefore contribute substantially to the fulfillment of LRDC's overall mission.



MID-CONTINENT REGIONAL EDUCATIONAL LABORATORY

Lochran Nixon, Executive Director

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MID-CONTINENT REGIONAL EDUCATIONAL LABORATORY

Mission

Mid-continent Regional Educational Laboratory was established in 1966 as a private, not-for-profit corporation engaged in educational research, development, training, and utilization practices specifically designed to bridge the gap between educational research and classroom practice. The basic objective of the laboratory's mission is to create improved educational programs and practices through systematic long-term programs of research and development. This is accomplished by bringing together a wide range of local and national talents to serve the needs and concerns of educators within a region while addressing attention to national priorities.

In addition to McREL's demonstrated product development capability, it also serves a unique relationship as a regional institution to serve State departments of education and local school districts. The laboratory was founded with the expectation that it maintain close relationship with its regional constituents and reflect priorities established at the local and regional levels.

McREL places a high priority on serving the needs and concerns of educators within a given region while addressing attention to national priorities. In its continuing relationships with educational agencies within its region, McREL involves practitioners to the maximum degree possible in the research and development process. McREL emphasizes the development of a regional educational R. & D. capability through programmatic linkages between the laboratory and regional colleges and universities, SEA/LEA research units, and other appropriate resources which can respond to a wide range of needs and exhibit deployment flexibility.

The following are among the more important assumptions underlying McREL's mission as a regional educational laboratory:

- Practitioners are more likely to effectively utilize programs and products in which they have been actively involved in the development process.
- Primary attention should be given to developing programs and products to serve specific user needs based on local and regional priorities rather than developing products without a clearly defined purpose or use.
- Effective product development and utilization is both a tedious and time-consuming process which requires a coordination function not usually found in any local combination of agencies in the midcontinent area.

- The resources of innovative educational practices, tested products, and research outcomes are much more abundant than in previous years. With the increased availability of educational alternatives, more attention must be given to establishing management systems to better insure intelligent selection, local adaptation, effective utilization, and evaluation of educational change mechanisms.
- The service functions of McREL become very important in the midcontinent area where few intermediate service agencies or other mechanisms exist to bring together practitioners to work on common problems.

McREL utilizes a variety of complementary strategies and resources in its mission to respond quickly and efficiently to regional needs and priorities. A programmatic development strategy is employed which utilizes a nucleus of lab-based personnel complemented by university and SEA/LEA research staff on a shared-time basis to complete a development team's requirements. This strategy serves to support the development of a regional system of R. & D. talents and resources; sustain interest and commitment among local personnel in the R. & D. process; improve communication among regional and laboratory R. & D. producers, participants, and users; and stimulate a user-oriented research, development, and utilization environment.

McREL's service and technical assistance strategy is designed to provide assistance to regional personnel which otherwise would not likely be available. As perceived within the region, the laboratory is a facilitating type of organization which has developed a response mechanism readily available to constituents primarily related to the improvement of practice of education personnel.

These services include: Conducting needs assessments; planning, conducting, and evaluating specialized staff-development programs which emphasize human awareness and improvement of interpersonal relationships, staff, and instructional development; providing clearinghouse functions (information and products produced at other labs and centers as assistance on how to use these R. & D. outcomes effectively); and assisting in the needs of local-user requirements.

Through a strategy of regional coordination, communication, and linkage, the participation of a large number of practitioners in laboratory governance and advisory capacities promotes the interchange of ideas, information of regional needs, priorities, and potential cooperative endeavors. One important resource for this strategy consists of Project Communicate, a joint venture of the Kansas State Department of Education and McREL. This service is gradually increasing its potential to serve the entire midcontinent area and provides the basis for a regional informational network.

Forward planning activities among State departments of education. State department personnel are available on an assigned basis to participate in regional planning coordinated by the laboratory. The laboratory occupies an institutionally unique position in terms of its essential neutrality, a kind of institutional nonbias which enables it to function evenly among the existing variety of education-type hierarchies present in and among educational agencies in the region.

Establishing planning, coordination, and communication linkages to relate all of the above activities into a system network. McREL and CEMREL have initiated a cooperative venture to utilize combined strengths of both laboratories to better promote effective R. & D. development and utilization. This is one example of McREL's approach to a continuous need for a broader frame of reference in seeking solutions to common problems. Regional consortia, special-problem analysis, interface among many policymakers, community participation, and selected leader-consultants have provided the kind of mix essential to accomplishing the continuing laboratory mission.

Governance

The property and affairs of the laboratory are managed and controlled by a board of directors consisting of 18 members who represent business fields, professions, public and private elementary and secondary schools, State departments of education, and higher education in the midcontinent region. In addition to directors, some 60 to 80 other individuals participate in decisionmaking processes through various laboratory and program advisory groups. The chief executive officer of the laboratory is the executive director who serves at the pleasure of the board of directors.

Management

The laboratory's internal organizational structure consists of an executive director assisted by coordinators for planning, program development, technical assistance and training, and support functions.

A policy council consisting of the director and coordinators with input from appropriate advisory committees develop overall

Figure 1. Organizational structure

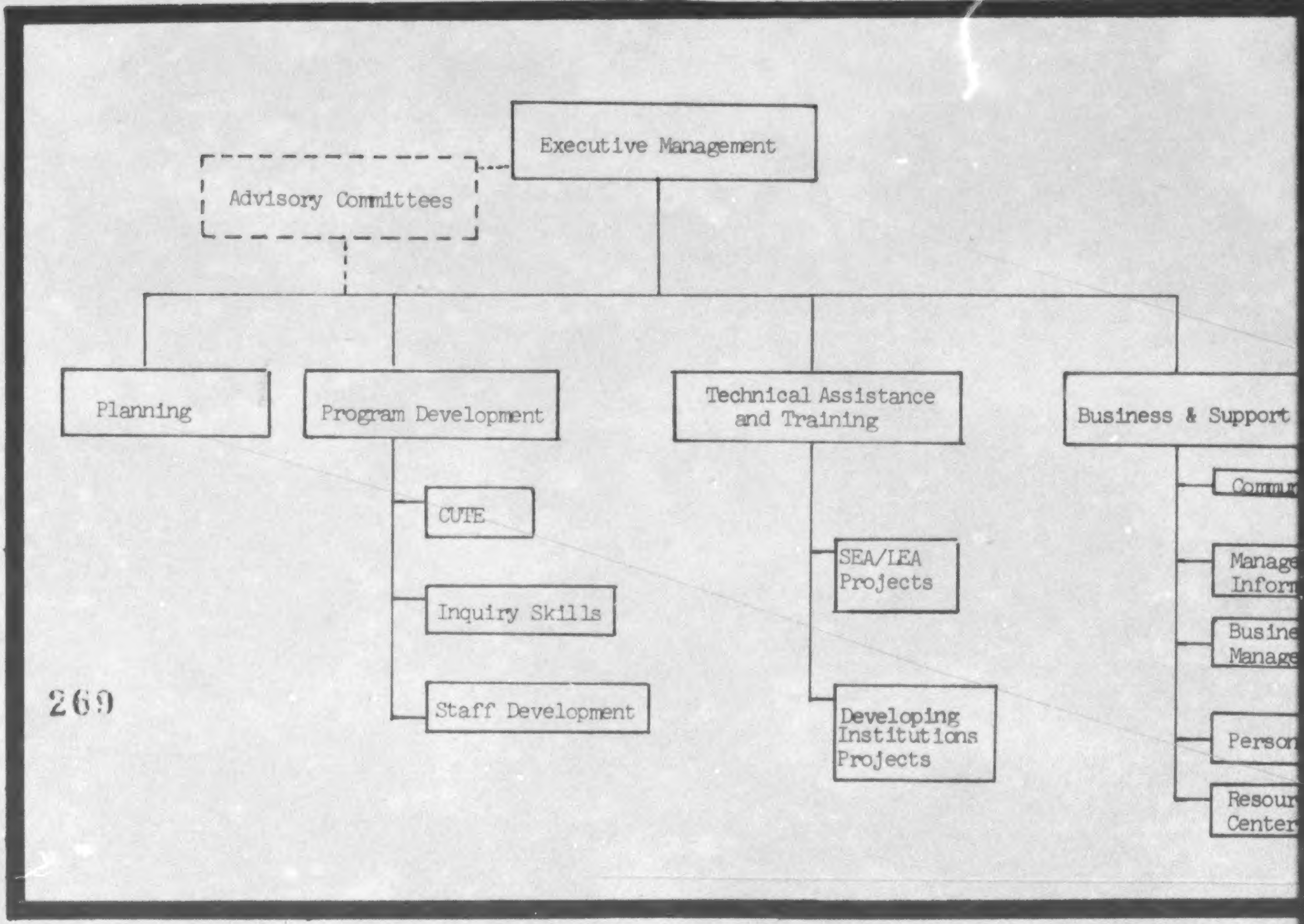
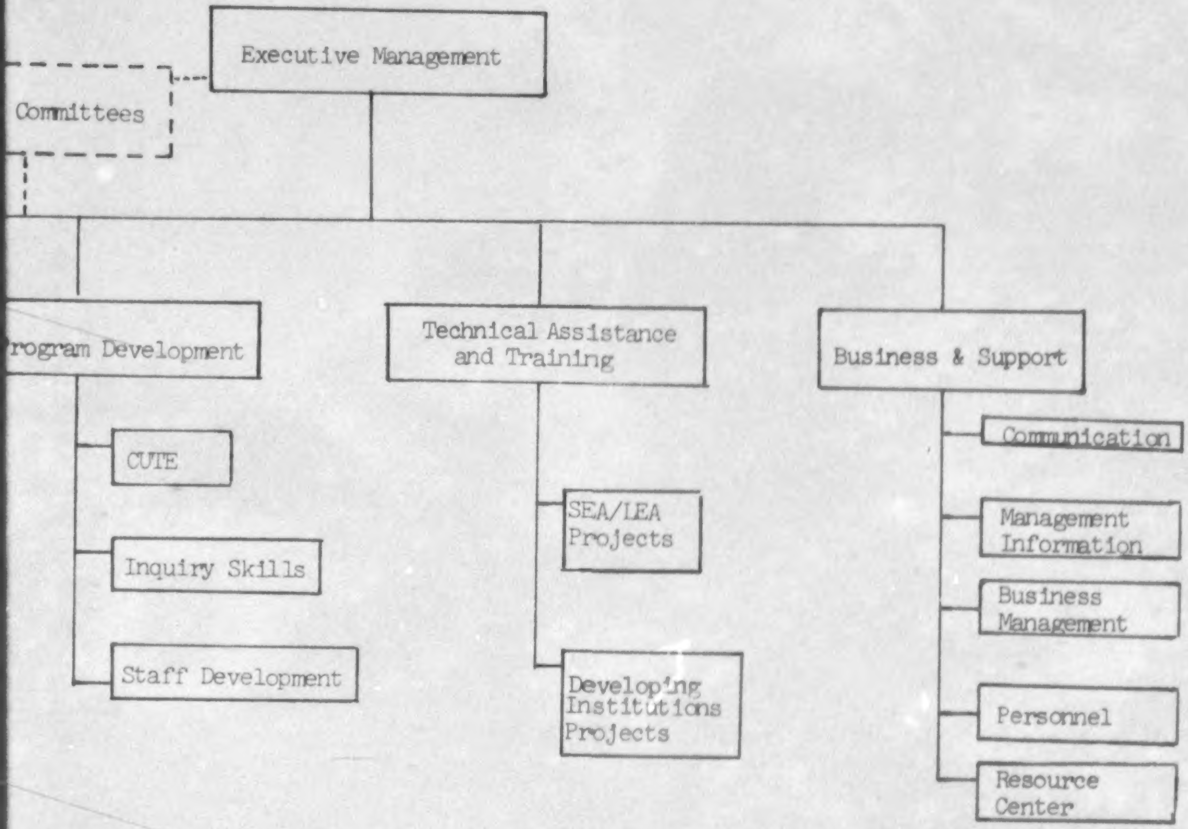

Executive Management
Advisory Committees
Planning
Program Development
CUTE
Inquiry Skills
Staff Development
Technical Assistance and Training
SEA/LEA Projects
Developing Institutions Projects
Business & Support
Commun
Manage Inform
Busine Manage
Person
Resour Center

Figure 1. Organizational structure


Executive Management
Committees
rogram Development
CUTE
Inquiry Skills
Staff Development
Technical Assistance and Training
SEA/LEA Projects
Developing Institutions Projects
Business & Support
Communication
Management Information
Business Management
Personnel
Resource Center

internal policy guidelines for the laboratory's operations. The organizational chart (figure 1) illustrates the relationship among the four functional areas. Extensive overlap in staff roles and relationships occurs between and across the planning, program development, and technical assistance and training areas.

All major programs and service components of the laboratory are monitored through a management-information system. This system provides feedback information to coordinators and the laboratory director on the extent to which projected accomplishments are being realized.

Evaluation components are built in as an integral part of each program activity. To insure quality control in evaluation standards across activities, an evaluation advisory council composed of program evaluators approves all major evaluation plans. The evaluation council has direct access to the laboratory director.

Staff

As described in the discussion of laboratory mission, a primary objective of the laboratory is to develop an increasing R. & D. capability in the region served. This is accomplished by establishing shared-time staff relationships with regional universities and SEA/LEA research units. In concept and practice these arrangements are not viewed as merely consultant resources available for periodic short-term assignments, but as a growing body of expertise with an increasing level of R. & D. skill and experience coordinated by the laboratory central-office staff. Such arrangements also permit the retention and availability of R. & D. talent in the region by accommodating increasing and decreasing staff requirements with fluctuating funding—a common characteristic of R. & D. organizations. Currently, some 16 professional and 9 support-staff members serve the laboratory. This number increases to approximately 50 professional staff members with shared-time relationships.

The staff resources represent a breadth of educational backgrounds including the behavioral sciences, traditional academic discipline, educational administration and curriculum development, and a host of related fields. Approximately 80 percent of the professional staff hold doctorates. Some areas of staff expertise are research design, evaluation-measurement, planning, and organizational theory and development.

Staff Development

The professional staff participating with McREL to build a regional capability to develop and utilize R. & D. outcomes effectively find it necessary to assume a variety of role responsibilities. These responsibilities require both refinement and expansion of present skills to conduct needs assessments, choose viable alternatives, and conduct training and implementation activities. McREL staff believe that these skills can best be developed through a team effort of persons having different talents who are committed to solving a common problem which is of concern both locally and nationally. Depending on the problem and location, team personnel will find it necessary to demonstrate varying degrees of leadership to improve human relations, curriculum design, decisionmaking processes, and management processes to support effective R. & D. and utilization. McREL through its coordinating function determines and helps to stimulate the best team combination of talents and abilities to meet the requirements of the task situation. This coordinating function serves three important purposes which are critical to the mission of the laboratory. These are--

- To stimulate a self-development process to increase flexibility and confidence among full-time and part-time staff members to maximize efforts in a shared or team operation. This adds flexibility to the growing regional capability process which insures a continuous blend of resources and talent within the region which can be assembled quickly and effectively to deal with a wide range of assignments.
- To maintain a long-term process of product development and utilization which serves to maintain staff interest and enthusiasm to deal with a tedious and difficult task of making educational change. This staff-development process insures continuity in the process.
- To increase flexibility and continuity not only across institutions and agencies within the region but vertically as well from State department representatives to teachers and students in classrooms.
- Through the exchange of talents of staff within the region, cooperative relationships are developed which lead to new ideas and initiatives which add the dimension of self-renewal. The past also becomes relevant to the future.

Training Provided to Others

The staff-development processes utilized by McREL to reach its mission become strongly evident in its training provided to others. The overall goal is to help regional constituents better able to help themselves as they deal with problems which they see as being important. McREL teams provide training and services on both a shared cost and/or contractual basis. As indicated previously, McREL serves to coordinate training and technical services for a variety of target populations. These include:

- Four cooperative urban teacher education sites (Kansas City, Omaha, Wichita, and Oklahoma City). Each involves 15 to 25 cooperating colleges. These preservice training programs focus on improving teaching skills and instructional procedures in urban or inner-city schools to enhance educational opportunity for minority youth.
- Staff development programs to improve staff competencies and inservice teaching conducted widely at both SEA and LEA levels throughout the region and other areas of the Nation. This target audience includes administrators, counselors, teachers, support staff, and community participants. It focuses on four areas: Human awareness, instruction, community, and curriculum.
- A laboratory product package--Instructional Staff Development. It serves as the basis of training programs which have been successfully carried out in at least 12 States focused on improving teacher competencies to control and extend inquiry influence in the classroom. This program is aimed at preservice, inservice, and college teachers either in a teaching and/or trainer-of-trainers role.
- Another laboratory product, Inquiry Role Approach, linking laboratory staff with school districts in eight States in a trainer-of-trainers role to help teachers implement the Inquiry Role Approach (IRA) package in their classrooms. These training activities focus upon inservice teachers and orientation of Silver-Burdett publisher representatives.
- Field-based urban master's degree. This developmental program focuses on training graduate students to assume leadership roles in urban schools. It is being developed in a cooperative relationship between McREL and St. Louis University. An extension of the preservice CUTE model to the master's level, this developmental program seeks to build on CUTE concepts and provides a school-oriented support system to insure the continued development and utilization of improved teaching and learning environment strategies.

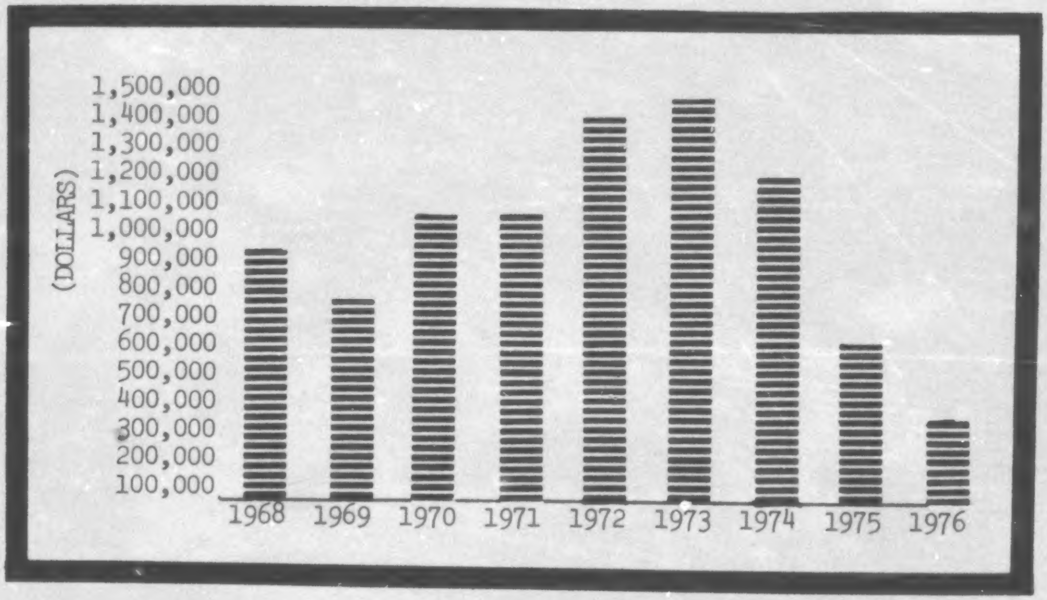
- Developing Institutions Assistance program. The laboratory has established an assisting agency relationship with 12 small colleges designated and supported as developing institutions by title III, Higher Education Act. A major objective of the McREL assistance component focuses on the restructuring of curriculum and concomitant faculty and administrative development to promote the integration of the traditional liberal-arts curriculum with increased career orientation.

Institutional Relationships

Through the participation of a large number of practitioners in training and staff-development activities which are supported by the functions of advisory and governance groups a unique set of institutional relationships emerge. These relationships integrate a variety of functions, personnel, and purposes:

- CUTE diffusion network. Through the process of disseminating the CUTE model and materials a nationwide network of colleges and participating school districts exists. Included in the network are in excess of 100 colleges and universities located in 23 States. This network continues to be useful as a means of exchanging information on the improvement of teacher training.
- Developing institutions assistance network. McREL works with 12 small colleges in activities supported by title III of the Higher Education Act to strengthen institutional development in four areas. These include curriculum development, staff development, student services, and administrative development. This network provides for interchange of programs and information among participating institutions.
- Project Communicate network. Through the cooperation of McREL and six State departments of education, an information-retrieval service has been established. The system provides information exchange among States in addition to a computer-based resource system to educators at all levels within the participating States
- Regional R. & D. network. As described previously, the relationships established with universities and SEA/LEA research units for shared-time arrangements serve as an important linkage mechanism which involves a variety of participating agencies. These linkages provide an opportunity for institutions to demonstrate greater leadership and expertise in specific areas while sharing ideas and receiving assistance in others. In this manner the institutions and practitioners serve each

Table 1. Funding history



other more effectively and the overall regional capability is increased.

Facilities The laboratory's principal facilities are located in Kansas City, Mo., in space provided through a cooperative arrangement with the Kansas City, Mo., School District. Approximately 10,000 square feet of office and support-function spaces are located in a school district facility in the southwestern area of the city. Data processing, media production, and ETV access capabilities of the laboratory have been combined in cooperative arrangements with local universities to provide reliable and cost-effective support systems in these areas. In addition to Kansas City, the laboratory maintains offices for program development and training activity in Wichita, Kans., and Lincoln, Nebr.

COMPLETED OR TERMINATED NIE PROJECTS

Project INSTRUCTIONAL STAFF DEVELOPMENT (ISD)

Objectives and strategies. The ISD program was designed to train junior and senior high school teachers to exhibit behaviors which lead to student-inquiry behaviors. The program, designed for 1 school year, includes 2.5- to 3-hour instructional sessions, plus 15 practice sessions of 1 hour each. The instructional materials are divided into six components which are implemented in somewhat sequential fashion. A trainer's manual for each component serves as the focal point for implementation activities. The manual provides step-by-step instructions for preparation, execution, and evaluation of the training activities. The principal training-sequence strategy consists of orientation, instruction, practice, evaluation, and implementation. The trainer uses the manual direction to provide a role for himself as trainer in helping teachers which can be assumed by selected teachers to become trainers. Pretests and posttests are provided for each component to be used by the trainer to assess progress of each individual teacher.

The objectives of the program included the helping of teachers to (1) control and modify their instructional behaviors; (2) use cognitive or structuring skills and affective behaviors to plan lessons, present them, and evaluate the results; (3)

develop a series of sequential lessons which incorporate content, process, and teaching strategies; and to increase effectiveness to choose strategies to best support students in a variety of learning situations.

Unique features of the program focus on it being a complete self-contained program which can be used many times by a series of trainers with little materials cost.

Accomplishments. The ISD package is currently available at McREL in its completed form. Brochures, pricelists, and product descriptions are available at the laboratory.

Funding.

OE funds	$350,000
NIE funds	110,000
Other funds	0
Total	460,000

Monitoring history.

Dates	Project officer	Activities
September 1972		Site visit by Panel C (Margaret Chisholm, Edythe Gaines, Ken Howey, Don Ely, Barak Rosenshine) and Sue Gruskin.
Dec. 1, 1972- February 1974	Mary Johnson	General monitoring.

Project INQUIRY-ROLE APPROACH (IRA)

Objectives and strategies. Inquiry-role approach is an instructional system for teaching secondary biology which includes teacher-training materials, a teacher's manual with instructions for day-to-day classroom activities, and student materials.

While the goals of IRA include the learning of biology content—factual information, concepts and principles of biology—

the goals also emphasize inquiry skill development, social interaction skills, and attitude development necessary for good inquiry. The IRA method is based on the premise that biology content understanding, inquiry skills, social skills, and attitudes are interdependent and can be achieved best in a program that integrates them.

A combination of individual, small-group, and whole-class activities is used to expedite learning of important skills and concepts. Major emphasis is given to learning and using four roles of responsibility by members of the four-pupil small groups. These responsibilities complement each other and are periodically reassigned as pupils master them.

The product moves pupils through three steps or "themes" of activity, each one culminating in a several-week-inquiry project. These projects, or laboratory explorations in biology, are successively less structured and open ended to serve as a vehicle for demonstration of the gradually developing inquiry skills and attitudes of pupils. The structure of and dependence on teams gives way by "Theme III" to freedom to work individually or select teammates. This developing competence is formatively assessed through the year by individuals, teams, the class, and the teacher. All data is shared and procedures are elaborated to put the data to use by indicating specific areas needing remediation. Instruments for measuring content, inquiry skill, social skill, and attitude are part of the product.

A unique feature of this program focuses on integration of the social, cognitive, and attitudinal skills in a curriculum format which emphasizes classroom use by students.

Tested items and instruments to measure fulfillment of IRA's objectives and their derivatives are included for use at the activity, theme, and pretest and posttest levels. Special attention was given by the developers to provide instrumentation needed to assess, particularly, the inquiry skill, social skill, and attitude dimensions of IRA. Explicit guidelines for teacher and student administration, scoring, and data interpretation of instruments are included in the product.

Accomplishments. The "Paper and Pencil" parts of the IRA (teacher's manual and student materials) are available from the publisher, Silver-Burdett, Morristown, N.J.

Trainer of Trainer (intermediate agent) materials and supplementary audio and video tapes have not yet been published.

The IRA product is available from:

Silver-Burdett Co.
A Division of General Learning Corp.
250 James Street
Morristown, NJ 07960

The film "Learning Through Inquiry: The Search for Mount Everest," showing unrehearsed IRA classroom episodes filmed in 1971, may be rented from the producers:

I/D/E/A
P.O. Box 446
Melbourne, FL 32901

Funding.

OE funds	$1,256,700
NIE funds.	142,000
NSF funds.	12,000
Total	1,410,700

Monitoring history.

Dates	Project officer	Activities
September 1972		Site visit by Panel C (Margaret Chisholm, Edythe Gaines, Ken Howey, Don Ely, Barak Rosenshine) and Sue Gruskin.
Dec. 1, 1972-February 1974	Mary Johnson	General monitoring.

Project COOPERATIVE URBAN TEACHER EDUCATION PROGRAM (CUTE)

Objectives and strategies. The Cooperative Urban Teacher Education (CUTE) program is a nationally recognized preservice teacher-education program designed to effectively prepare teachers for inner-city schools. CUTE is an intense 16-week training conducted during the semester in which the college student is enrolled for student teaching. The objectives of the CUTE program are to prepare the teacher to understand his own and his pupils' environment and culture; understand his own and his pupils' attitudes, insecurities, anxieties, and prejudices; and understand and possess competency in inquiry teaching methods.

The unique features of the CUTE model are that it is field based and interdisciplinary in approach. The first 8 weeks of CUTE consist of observations in schools, field experiences in the community, and seminars in three substantive areas: Teacher education, sociology, and mental health. During the last 8 weeks of the program, the student does his normal student teaching, but in a school located in a low-income area of the city.

Through the sociology component, students are required to participate in many field experiences in the inner-city community in which they will be teaching. Volunteer work with community agencies, tutoring pupils in their homes, observing for 4 hours in the waiting room of a hospital in the community, or doing a sociological case study of an individual pupil throughout the semester are examples of sociological activities in which CUTE students might engage. A vital part of the program is the "live in"--an arrangement in which each student spends an entire weekend with a family in the community—perhaps the greatest learning experience for participating students. In this way, members of the community are actively involved in the operation of the program.

Evaluation forms to assess students' progress are included in the CUTE manual or supplementary materials. Forms include rating forms to evaluate CUTE students, a few essay and objective instruments to measure mastery of certain concepts, and numerous outlines for required reports to be completed by CUTE students. Some standardized instruments that can be administered on a pre-, mid-, post-basis are described in the program manual, but these are optional. Program staff will need to construct some measurement instruments, but performance criteria and other guidelines listed in the manual can be used to assist staff in this task.

The CUTE program has been implemented successfully at 30 sites across the country; and approximately 2,600 student teachers have been trained in the program as of the end of 1975 (calendar year). The installations have been accomplished through a 5- to 7-day training workshop in CUTE objectives and procedures prior to the semester in which implementation occurred, conducted either by staff from the developing organization or staff who have had 1 year or more of experience directing or teaching in CUTE programs.

The large diffusion effort in 1973-74 involved the training of staff for 12 new regional sites (who were initially trained by McREL staff; and had 1 year of experience with the program) rather than by McREL program-development staff. Thus, because of the lack of necessity for major intervention by the developers in the implementation process and because of documented high ratings of new sites by project monitors on characteristics essential to the proper implementation of CUTE, it is clear that the program is transportable.

Accomplishments. Field tests and large-scale replications in a number of sites have been completed. Materials are currently being distributed by McREL.

Funding.

OE funds	$800,000
NIE funds.	500,000
Total	1,300,000

Project INSTRUCTIONAL SYSTEMS FOR ETHNIC EDUCATION

Objectives and strategies. The need for teachers to understand and to deal with pupil differences in value orientations is being increasingly posited by educators. The goal of the Mid-Continent Regional Educational Laboratory's program entitled, "Instructional Systems for Ethnic Education" (ISEE), was to facilitate and improve teaching/learning interaction by increasing the teacher's understanding of a pupil's value system as influenced by his sociocultural and socioeconomic background.

To achieve the goal of explicating the similarities and differences in value systems held by students of different social class and ethnicity, the ISEE program established seven objectives for fiscal year 1973. These objectives were:

- Identification of the value scale(s) for a survey study.
- Selection of the value scale(s) for the survey study.
- Identification of the key variables relevant to research on values.
- Selection of the key variables relevant to research on values.
- Design of a pilot survey and a survey study.
- Conducting a pilot survey and a survey study.
- Development of an evaluation plan for the objectives described above.

Accomplishments. The following products were produced: A review of literature related to value and key variables used in ISEE pilot study, and a report of the pilot study and formative evaluation.

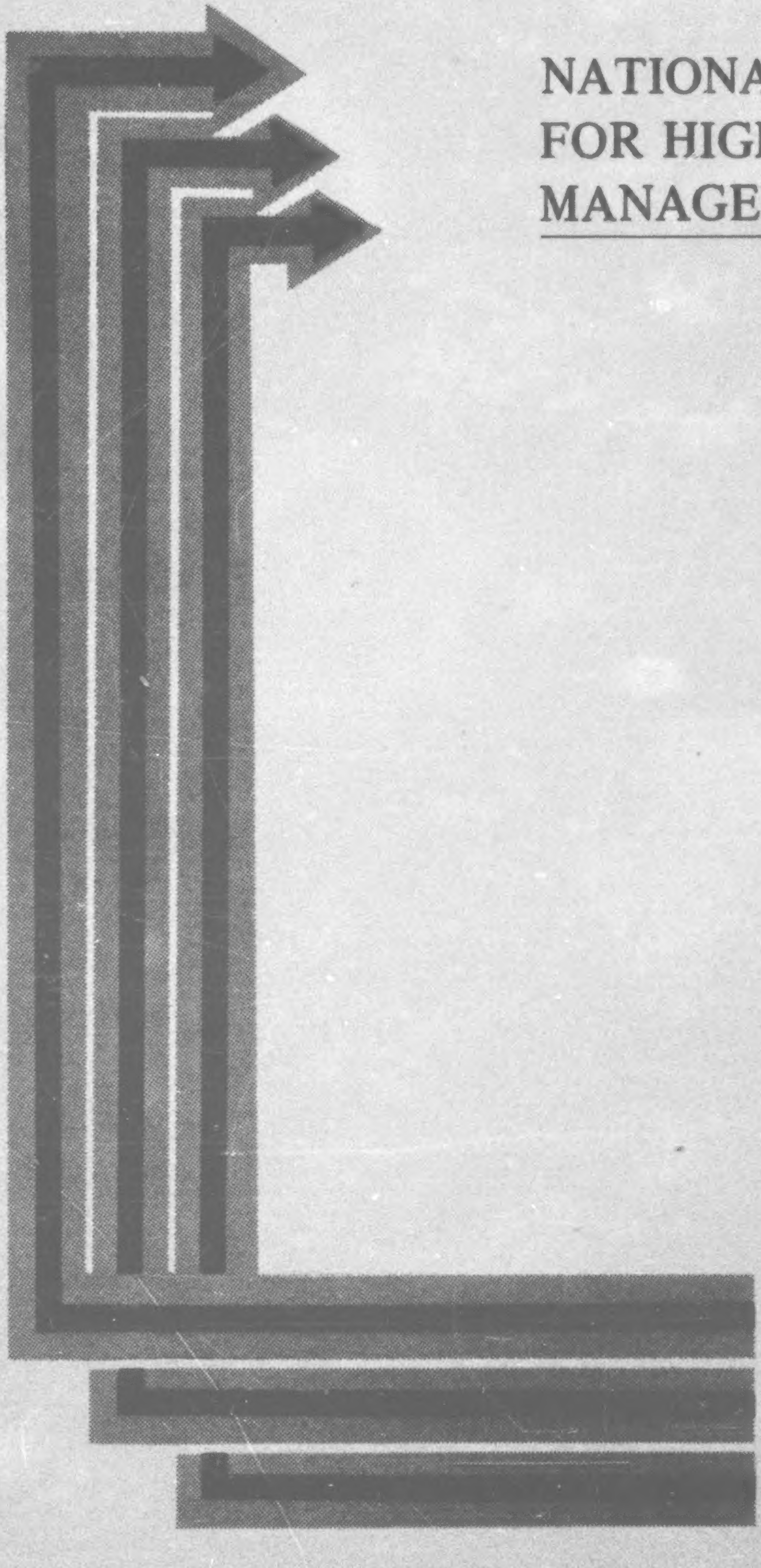
Status. This project has been terminated.

Funding.

Fiscal year 1972	$421,930
Fiscal year 1973	283,500
Total	705,430

Monitoring history.

Dates	Project officer	Activities
1972-74	Marc Lohman	Site visits, phone calls.
1973		External review by Robert Guthrie, Murray Wax, Betsy Useen, Eunice Turk, Marc Lohman.



NATIONAL CENTER FOR HIGHER EDUCATION MANAGEMENT SYSTEMS

Ben Lawrence

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NATIONAL CENTER FOR HIGHER EDUCATION MANAGEMENT SYSTEMS

Mission

The mission of the National Center for Higher Education Management Systems (NCHEMS) is to undertake research, development, and dissemination activities, and to support and encourage similar efforts by others, that will help improve planning and management in postsecondary education.

To this end, the center seeks to extend the adoption of modern management concepts and techniques in postsecondary education. It seeks equally to enhance the ability of academic administrators and policymakers to use these concepts and techniques to full effect in their efforts to improve productivity and achieve more comprehensive, demand-sensitive planning of programs and services. These objectives reflect the center's conviction that there is urgent need for better management and planning of postsecondary education, in which the Nation invests some $45 billion a year.

A new environment of public skepticism and fiscal constraint has developed for postsecondary education at a time when demographic factors, among other influences, have begun to substantially retard the longstanding trend of large annual increases in postsecondary education enrollment. At some institutions and in some areas, enrollments have declined. Nearly everywhere, abrupt shifts in patterns of program demand by students have created productivity-threatening situations with which, by and large, traditional academic management practices cannot satisfactorily cope. Typically, the campus administrator is not adequately equipped to make viable plans for the next 10 to 20 years—a period that promises to be at least as unsettled and unpredictable as the seventies have been.

The importance of the mission of NCHEMS and the need for a national center to carry it out are implicit in the following considerations:

- Postsecondary education has become an enterprise of great size and baffling complexity, available in one form or another in virtually every community and serving more than 10 million students—nearly all of whom are of voting age and may claim the status of taxpaying adults. Its long period of untrammeled growth, however, is clearly at an end and public concern for efficient use of resources in postsecondary education is not likely to diminish.

- There is a significant cause-and-effect relationship between the quality of management of academic departments, institutions, and systems in postsecondary education and the quality and cost of educational services received by students and society. The positive experience of business, industry, and government with modern management concepts and techniques is persuasive evidence that use of those concepts and techniques in postsecondary education is essential to its vitality, effectiveness, and efficiency.

- The abiding controversy about productivity in postsecondary education will not be resolved until institutions are satisfied that they have the means to demonstrate the full value that education imparts to the individual personally, to the enterprise in which the individual pursues a career, and to society at large. A proper calculation of the ratio of costs to benefits, which is the true measure of productivity, calls for objective information about educational outcomes--measures, where quantification is feasible. But research and development in the field of outcomes measures is still in the pioneer stage. Improvement of productivity may well depend on research into the relative efficacy of the many different ways in which institutions are organized and operated.

Broadly speaking, administrators and policymakers concerned with finance and productivity in postsecondary education try to achieve fiscal viability by keeping revenues, expenditures, and constituency expectations in balance. In general, this three-way equilibrium can be accomplished by (1) acquiring more revenue from established sources or locating new sources of revenue sufficient to cover expenditures, (2) cutting costs by curtailing operations or making them more efficient, (3) reallocating resources to accomplish priority objectives with available dollars, or (4) finding ways to bring the objectives and expectations of the diversity of constituents into congruence with the level of services that available resources can provide.

Responsible administrators and policymakers make every effort to increase the benefits of postsecondary education by finding ways to promote such things as expansion of knowledge, improvements in student development, and higher levels of service to the community, State, and Nation. They seek also to make these benefits available to more people, such as new learners and underfunded students. But they must try, particularly today, to deliver these benefits at the least possible cost. In other words, administrators and policymakers are, for the most part, hard at work trying to improve productivity in postsecondary education.

Many of the decisions and policies arrived at in the interest of productivity have been based upon impressionistic perceptions rather than the factual information and analysis that good management practice demands. The results frequently have been less than was hoped for, sometimes a good deal less. NCHEMS believes that before selecting a course of action, planners and managers should examine available alternatives for accomplishing the objectives of postsecondary education and then take into account the many different perspectives and values that prevail among those to be served. The decision process is beset by complex problems, many of which have no easy short-term solutions. Postsecondary education vitally needs new planning and management capabilities to cope with emerging trials and an ambiguous future.

The specific needs are for research and development efforts to provide better information to administrators and policymakers, development of tools and techniques that permit sharper insights into educational issues and decisions, and new knowledge and skills to deal with the fundamental questions of finance and productivity. The need for long-term research and development in these areas is clearly recognized and expected by the people directly involved in postsecondary education planning and management.

Research, development, and dissemination related to improving planning and management in postsecondary education will be required indefinitely into the future. Modern management concepts and techniques designed for business, industry, government, or the military cannot be applied to postsecondary education without considerable modification. Substantial research, development, and dissemination are required to adapt and apply such management approaches to new uses. In those enterprises where such concepts and techniques already are firmly established, a considerable amount of productive research, development, and dissemination to achieve improvements continues. The same should be true for postsecondary education, since it is among the most complex and diffusely organized of all enterprises and experiences frequent change in substance, process, and environment. Managers in postsecondary education seldom, if ever, are specifically trained or educated for management roles. Literally tens of thousands of such individuals stand to benefit, along with their institutions or agencies, from training or guidance in the use of up-to-date management techniques and planning processes.

Improving the basic knowledge and understanding of planning and management in postsecondary education is one of NCHEMS' primary roles. NCHEMS carries out this role by advancing the state of the art with regard to planning and management in postsecondary education and improving the knowledge and skills of postsecondary education planners and managers. The first of these strategies suggests projects that are for the most part basic research in nature; the second, projects that are generally dissemination and skill building in character.

Improving information, its availability and accessibility is another role. This role includes developing standard definitions, procedures, categories, and codes for postsecondary education data; implementing a compatible, standard communication base; improving availability of, and access to, data relevant to postsecondary education planning and management; and improving planners' and managers' capability to communicate information to selected audiences.

Addressing problems/issues faced by postsecondary education planners and managers is a third NCHEMS role. NCHEMS strategy in regard to this role is to develop products that address specific problems such as program costing and resource allocation; develop products that address problems of particular groups of decisionmakers (e.g., college deans and department heads, analysts, and planners in State postsecondary education agencies); and develop general-purpose analytic tools and procedures.

The role of NCHEMS as a consensus maker and coordinator of research explains in part why it has always sought the active participation of the higher education community in its work, through such mechanisms as task forces, advisory bodies of various types, and pilot testing and field review of products. The strongest motivation to build and maintain an extensive network to facilitate constituent involvement derives from the center's conviction that its research and development efforts can be justified in the long run only if they result in products that are widely useful. NCHEMS involves potential users in nearly all phases of research and development as the best way to insure the utility and acceptance of its products. The constituent network is one of the center's major resources and NCHEMS will continue to extend its interaction with the postsecondary education community.

Always an important part of the NCHEMS program, dissemination has been built in the past around the strategy of early involvement of potential users in research and development. This early involvement contributes to the success of NCHEMS products for three basic reasons:

- The campus professional often is research oriented, self-reliant, and/or healthily skeptical of the merits of work done elsewhere. NCHEMS tries to reduce this skepticism by inviting institution-based experts to contribute to the development of NCHEMS products both formally by serving on task forces and participating in systematic field reviews and pilot tests and informally through ad hoc consultation with staff. These contributors usually find that they have a professional stake in promoting wide use of the end products to which they lend valuable endorsements.
- With a knowledgeable group of potential users assembled as a task force or advisory committee to examine and oversee staff work throughout the course of a project, there is less chance that the center will develop a product that widely misses the mark of user need.
- NCHEMS markets new concepts, new ways of doing things. User involvement in development efforts serves to overcome fears about the efficacy of new approaches and improves the credibility of NCHEMS, so that the attitude toward its products will be one of acceptance rather than hostility.

Dissemination at NCHEMS has included the conventional activities—training, onsite implementation assistance, and the distribution of research and development reports, manuals, and general-information publications and brochures. These activities will continue, but other dissemination strategies will be employed also, including research into the dissemination process--for example, a study of the incentives/disincentives created by different dissemination activities.

The center will strengthen the evaluation and feedback process that provides both quality control and an assessment of the impact of NCHEMS products. Evaluation information is important in establishing future policies and program directions for NCHEMS, in keeping the postsecondary education community informed about the center's positive and negative effects, and in being accountable to NCHEMS sponsors and constituents.

Process evaluation is achieved by internal staff efforts and through the staff's interaction with the NCHEMS advisory structure. Internal quality control is reinforced by board supervision of programs and projects and the continuing input of advice and criticism provided by task forces, advisory committees, and consultants. Evaluation of the use of NCHEMS projects and concepts has been accomplished both by informal assessment of staff field experience and observations and by formal studies. In 1972, the business research division of the Graduate School of Business Administration at the University of Colorado studied the impact of NCHEMS activities and products at more than 100 institutions, systems, and coordinating agencies. In 1973, the center itself surveyed all institutions and systems of higher education in the United States to gage the extent of their familiarity with the center and its work. In 1975, an external evaluation of product use and impact was initiated by an expert, hired on a short-term basis, who reported to the director of the center and to the evaluation committee of the NCHEMS board. In the coming year, this evaluation effort will be continued. The board's evaluation committee will continue to review the evaluation plan and monitor progress.

The center feels that more comprehensive impact evaluation is needed and will encourage external evaluation. Specific information should be collected on the extent to which NCHEMS products are being used as well as the direct effects of that use. Future evaluation studies should probe more deeply into both the intended and unintended impacts that the center is having on postsecondary education decisionmaking processes and organizational changes. The overall impact on an institution of the NCHEMS concepts and products should be evaluated.

Governance

The National Center for Higher Education Management Systems is the primary component of the Planning and Management Division of the Western Interstate Commission for Higher Education (WICHE). NCHEMS functions independently under the direction of its own, self-perpetuating board of directors. The NCHEMS board appoints the center's director and exerts final authority over the center's policies, programs, operations, and planning. WICHE does, however, carry formal legal and fiscal responsibility for NCHEMS operations. The director of NCHEMS is also an associate director of WICHE and the center utilizes WICHE administrative services.

The governing structure of NCHEMS is extensive, representing all types of institutions—public, private and proprietary; 2-year, 4-year, and graduate level; liberal-arts colleges, comprehensive colleges, major research-oriented universities, and vocational/

technical schools. Representation also extends to all types of State agencies--governing boards, budget offices, coordinating councils, legislative agencies, and executive offices, national organizations, and Federal agencies.

The board of directors operates in a committee mode. There are an executive committee and four standing committees--futures, budget, current projects, and evaluation. At board meetings, staff report directly to the various board committees on the progress of individual projects. Any deviation from or delay in achieving project milestones must be approved by the board and its oversight influence is felt in all phases of center activity, from project and program planning to the research and development process and dissemination, implementation, and evaluation.

The national advisory council is appointed by the director of NCHEMS with the advice and consent of the board. The council channels advice to the board of directors from national and regional educational associations and governmental agencies and keeps the board aware of the perspectives of the major interest groups in postsecondary education. The council comprises representatives of higher education associations, national professional organizations that have an interest in or concern for postsecondary education planning and management systems, national compacts for education, and State legislative and executive offices.

Task forces and advisory committees are established for limited periods to provide consultation for specific center projects and activities. Their main responsibility is to provide advice to the staff relative to the feasibility and utility of NCHEMS products and to recommend changes and developmental directions that will enhance the usefulness and quality of products or undertakings. The structure and operation of task forces and committees may differ from project to project to provide the most effective method of obtaining advice, assistance, and evaluative feedback for each project. Generally, members are either technical experts or knowledgeable potential users.

The NCHEMS Participants Advisory Assembly, which meets once or twice a year, consists of liaison representatives designated by the heads of institutions and agencies participating in the NCHEMS program. The approximately 640 members constitute the primary basis for maintaining liaison between the staff and the various segments of postsecondary education. The assembly conducts national reviews of center products and provides a forum for discussion of the status and development of management systems in postsecondary education.

Management

Within NCHEMS, the organizing principle is twofold. Two key organizational elements, the institutional products unit and the statewide and national products unit are responsible for generic groups of projects directed to the planning and management needs of particular users. The evaluation, administration and dissemination, research and analysis, and communication base units are functionally oriented.

The progress from the first perception of a constituent need to research, development, field testing, dissemination, and, finally, implementation of the needed product is not one of well-defined, discrete stages. Nor is it accomplished by assembly-line division of effort. Staff who first suggest a project may well be involved in the whole process required to convert their concept into a management technique or tool of proven utility, in use on campus or in agencies. There is no rigidly prescribed, compartmentalized, lockstep way of doing things at NCHEMS.

Staff input is sought by the center's leadership when proposals to the board about budget priorities, new programing, and future directions are being prepared. A group composed of the five unit directors plus the deputy director and the director meets regularly to review major policy issues. Project-level decisions usually are made by the project manager. But if that decision has political implications, affects other projects, or requires resources in excess of the project budget, the project manager confers with the unit director and possibly the deputy director. There is a good deal of consultation and interaction among staff and between project managers and the director and deputy director. In addition, considerable staff support is provided to board committees. New ideas and alternative options are given every opportunity to surface.

Staff

NCHEMS is concerned that its research and development results be widely acceptable in postsecondary education. Consequently, it is the center's policy to recruit and maintain a staff of high caliber that universities recognize as being appropriately credentialed and fully competent to perform first-rate research and development.

In seeking vigorous, able professionals, the center places highest priority on developing overall staff resources. Recruiting solely to meet the staffing needs of specific projects is avoided if possible. As a result, the center's staff is of moderate size but possesses great flexibility in addressing the spectrum of planning and management needs in postsecondary education. The center can draw together staff resources to make up interdisciplinary teams well equipped to tackle any number of specific tasks.

During the first years of expansion as well as in the past 2 years of relative stability in staff size, a modest amount of rotation has allowed new blood to enter at all staffing levels. In 1975, for instance, two new unit directors were recruited--one from an executive position in a major State coordinating agency and the other from the position of director of management systems at a major research university.

Nearly all staff are recruited from institutions or agencies and when staff leave the center they usually return to positions in postsecondary education. At any given time, then, NCHEMS staff constitute a good sample of the center's constituency and have an inherent affinity for postsecondary education, with personal and professional stakes in helping to improve its management and reduce its problems.

The combined staff of NCHEMS and the planning and management division of WICHE totals 58, including 35 professionals, 17 secretaries and equipment operators, and 6 graduate research assistants.

Staff Development

Staff development at NCHEMS is carried out informally, for the most part. While there are no ongoing training programs, computer and other special classes are offered frequently by professional staff. Members of the staff also take courses at the University of Colorado or through industry sponsorship.

The center encourages professional staff to participate in and contribute to professional organizations, write professional papers, and provide consultation to other researchers and organizations, to the extent that this does not conflict with activities at the center. Several members of the center staff hold, or have held, adjunct faculty appointments at the University of Colorado to teach courses at both the graduate and undergraduate level.

All staff may participate in the broad-ranging WICHE staff-development program, through which instruction in a wide variety of subjects is offered on a released-time basis. The

Table 1. Staff discipline profile

SUBSTANTIVE FIELD OR DISCIPLINE	BACHELOR'S DEGREE	MASTER'S DEGREE	DOCTORAL DEGREE
Business/management science/ quantitative methods.	2	7	1
Communications.	1	1	—
Computer science.	—	3	—
Educational measurement and statistics.	—	—	1
Educational psychology.	—	—	1
Engineering/quantitative methods. .	1	—	1
Higher education	—	2	4
Operations research	—	1	2
Sociology.	2	—	—
Other	2	1	—
Total	8	15	10

center pays tuition for support staff who wish to take approved courses at recognized educational institutions, provided the course work will improve their work skills or advance their career-ladder programs. Support staff are encouraged to acquire professional skills and credentials. Promotion to professional status has been achieved by several women who began at NCHEMS as secretaries.

Training Provided to Others

Training takes place through seminars, institutes, and conferences conducted both by NCHEMS and others.

NCHEMS General Training Seminars are designed to acquaint participants with developmental work at the center and the use of available NCHEMS products. During calendar year 1975, 601 people from various positions in postsecondary education attended these seminars.

Statewide Planning Training Seminars, designed specifically for statewide agency staff, are offered two to three times a year. Some 120 persons participated in the 2 seminars offered in calendar year 1975.

Special training sessions are conducted as needed to support implementation. For example, a series of regional seminars was offered in the spring of 1975 to initiate the implementation of the NCHEMS information exchange procedures at more than 60 institutions. A special seminar is being developed to acquaint institutions with the collection of financial information and reporting formats. Another is being developed to acquaint statewide planners with the NCHEMS State postsecondary education planning model.

The center has provided resident training for interns in the Ford Foundation visiting-professionals program and for institutional faculty and staff on sabbatical leave. American Council on Education interns have visited NCHEMS for intensive briefings on center activities and products. Special workshops and briefings are given to touring professional groups and individuals from abroad. Occasionally, center staff accept invitations to consult with education officials in other countries.

In the future, the center hopes to establish formal credit-earning graduate programs and internships. At present, this kind of training is limited to six research assistantships that are granted to graduate students from various disciplines at the University of Colorado, under an agreement between the center and the University. Several members of the center's professional staff began their association with NCHEMS through appointment as research assistants.

Institutional Relationships

NCHEMS could not be effective without its highly developed network of established relationships with institutions, State and Federal agencies, and consultants and task forces knowledgeable in areas related to center projects. All these constituents provide expertise, information, and viewpoints that are incorporated into NCHEMS efforts, insuring that the center's products address high-priority concerns of the postsecondary education community and are ultimately useful in the field.

Formal relationships are established with NCHEMS participants—the institutions and agencies that agree specifically to work with NCHEMS to develop and pilot test products. Through its wide, diverse advisory structure, NCHEMS obtains the viewpoints of public, private, and proprietary institutions; 2-year, 4-year, and graduate colleges and universities major research-oriented universities; vocational and technical schools; liberal arts institutions; State governing boards, State budget offices, legislative and executive offices; and national organizations and Federal agencies.

A good example of NCHEMS cooperation with other groups is the Joint Accounting Group (JAG), composed of representatives of NCHEMS, the National Association of College and University Business Officers (NACUBO), and the American Institute of Certified Public Accountants (AICPA). Supported by a grant from the National Center for Education Statistics, JAG developed standard definitions, data categories, and report formats so that postsecondary education can produce uniform financial data for such uses as public reporting, institutional financial management, and program planning.

The impetus for cooperation does not originate exclusively with NCHEMS. For example, both the State higher education executive officers (SHEEO) and the American Association of Collegiate Registrars and Admissions Officers (AACRAO) have standing liaison committees that keep informed of NCHEMS activities of interest to their members, and NACUBO establish ad hoc liaison with the center as program activity warrants.

NCHEMS has cosponsored a number of major national conferences and seminars. In addition, an NCHEMS national assembly is held each year so that institutional, agency, and associatio leaders can address issues of importance to planners and managers in postsecondary education. The theme of the 1976 assembly was "Information and Analysis in the Context of Institutional-State Relationships: The Tie that Divides Us."

However, the assistance NCHEMS receives from participants speaks best for the center's relationship to various institutions of postsecondary education. For example, in the past year, 48 institutions have participated in the pilot test of the NCHEMS information exchange procedures. The experiences of these participants have pointed the way to numerous refinements, clarifications, and changes in the proposed IEP products, as well as showing clearly the need for additional exchange procedures tailored for different kinds of institutions.

At the request of various Federal agencies, NCHEMS has worked closely with them in developing reporting standards and providing consultation, on projects ranging from development of planning models to analysis of the impact of legislation. The center has worked both with the National Center for Education Statistics and the National Science Foundation in developing data definitions and reporting formats for collecting information about postsecondary education. NCHEMS has developed a national planning model for use by the Office of Education and has also developed a financing scheme which has had some influence on legislation affecting Federal support of postsecondary education.

The center frequently works with consortia of institutions and State agencies in joint problem-solving ventures. At present, NCHEMS is working with the Council for the Advancement of Small Colleges (CASC) to determine the adaptability of NCHEMS products to the needs of small colleges. This strategy of working with and through other organizations has applied also to other research organizations. NCHEMS worked closely with the Center for Evaluation at UCLA in developing outcomes measures and, in fact, incorporated some of the UCLA Center's work into the final NCHEMS product. Moreover, through its dissemination efforts, NCHEMS promoted the use of an evaluation kit developed by the UCLA Center. NCHEMS collaborates in various research and development and dissemination efforts carried out by organizations such as the Center for Research and Development in Higher Education at Berkeley and the Education Commission of the States.

Facilities The WICHE division of administration provides NCHEMS with such services as accounting, duplication, mailing, personnel, and purchasing. In addition, the WICHE library, which houses a selective collection pertinent to all areas of postsecondary education, serves the NCHEMS staff. Through interlibrary loan, the collections of libraries nationwide are available to staff. The library staff also maintains an excellent cooperative relationship with the University of Colorado library, so that this resource is readily available to NCHEMS staff.

Various other University of Colorado facilities and services are available to NCHEMS. All office space is leased in a university building on the Boulder campus. NCHEMS offices are near the university's computing facilities and development of most internally used and widely distributed systems is done on the university's CDC 64/KRONOS 2.0 and IBM 370/145/VS. However, NCHEMS maintains access to operating systems on a variety of hardware. NCHEMS currently subscribes to these other computer services: PDP-10 at the Colorado School of Mines; IBM 370/158/TSO at Boeing Computer Services and Systems Development Corp.; INFONET on Computer Sciences Corp.'s UNIVAC 1108 network; General Electric Timesharing GE/145; and an IBM 360/195/OS at United Airlines, which is accessed through remote job entry and IBM's timesharing option. This wide range of computer services and vendors is necessitated by the center's varying needs for computer support in its diverse project efforts.

CURRENT NIE PROJECTS

NCHEMS carries out its activities in part under a single contract with NIE entitled "Communication Base and Analytical Procedures." Below are brief descriptions of the various projects funded in this contract.

Project DATA ELEMENTS DICTIONARY AND NCHEMS GLOSSARY

Objectives and strategies. The major objective is the identification, definition, and compilation of standard data elements and terms that support postsecondary education planning and management at the institutional, State, and National levels. The Data Elements Dictionary serves this objective by defining elemental items of information for incorporation into institutional data bases. Basic data elements related to staff, students, courses, finance, and facilities are published in the dictionary to improve communication in planning, management, and information exchange. The project is also

Table 2. Funding history

Funding source	Funded prior to December 1, 1972	Funded since December 1, 1972	Total	Funding peri
Federal funding:				
HEW, National Institute of Education	—	$5,578,511 (81%)	$5,578,511 (49%)	Dec. 1, 1972-Oct
HEW, Office of Education, National Center for Educational Research and Development	$2,605,463 (57%)	— —	2,605,463 (23%)	June 21, 1968-No
HEW, National Center for Education Statistics	423,578 (9%)	— —	423,578 (4%)	June 15, 1970-Se
HEW, Bureau of Research	302,355 (7%)	— —	302,355 (3%)	May 15, 1969-Mar
HEW, Office of Program Planning and Evaluation	24,610 (1%)	46,614 (1%)	71,224 (1%)	May 1, 1972-June
HEW, Contracts and Grants Division	12,000 (0%)	— —	12,000 (0%)	June 28, 1971-Ma
HEW, Office of the Secretary	429,150 (9%)	70,487 (1%)	499,637 (4%)	June 8, 1970-Jun
HEW, Fund for the Improvement of Postsecondary Education	— —	48,000 (1%)	48,000 (0%)	Sept. 1, 1975-No
National Science Foundation	— —	54,384 (1%)	54,384 (0%)	Feb. 1, 1974-Jul
Miscellaneous contracts	— —	16,442 (0%)	16,442 (0%)	Dec. 1, 1973-Ind
Subtotal, Federal funds	3,797,156 (83%)	5,814,438 (85%)	9,611,594 (84%)	
Foundation support:				
Ford Foundation	526,329 (12%)	50,000 (1%)	576,329 (5%)	Dec. 1, 1969-Sep
Kellogg Foundation	— —	576,832 (8%)	576,832 (5%)	July 1, 1975-Jun
U.S. Steel Foundation	20,000 (0%)	— —	20,000 (0%)	August 1972-Ind
Rockefeller Brothers Fund	16,700 (0%)	— —	16,700 (0%)	Jan. 17, 1972-In
Exxon Foundation	8,640 (0%)	— —	8,640 (0%)	1971
Subtotal, foundation funds	571,669 (12%)	626,832 (9%)	1,198,501 (10%)	
Sales: Publications, software, training	230,847 (5%)	447,426 (6%)	678,273 (6%)	
Subtotal, NCHEMS	4,599,672 (100%)	6,888,696 (100%)	11,488,368 (100%)	
WICHE-Planning and Management Division:				
WICHE State funds	— —	38,106 —	38,106 —	July 1, 1975-Ju
HEW, Division of Nursing, Bureau of Health Manpower	— —	674,928 —	674,928 —	Mar. 17, 1975-S
State contributions	— —	66,000 —	66,000 —	May 1, 1975-May
Subtotal, WICHE-Planning and Management Division	— —	779,034 —	779,034 —	
Total	4,599,672 —	7,667,730 —	12,267,402 —	

Table 2. Funding history

	Funded prior to December 1, 1972		Funded since December 1, 1972		Total		Funding period
cation	——		$5,578,511	(81%)	$5,578,511	(49%)	Dec. 1, 1972–Oct. 1, 1976
onal Center for opment	$2,605,463	(57%)	——	—	2,605,463	(23%)	June 21, 1968–Nov. 30, 1972
tion Statistics	423,578	(9%)	——	—	423,578	(4%)	June 15, 1970–Sept. 30, 1974
	302,355	(7%)	——	—	302,355	(3%)	May 15, 1969–Mar. 31, 1971
g and Evaluation	24,610	(1%)	46,614	(1%)	71,224	(1%)	May 1, 1972–June 30, 1974
sion	12,000	(0%)	——	—	12,000	(0%)	June 28, 1971–Mar. 31, 1972
	429,150	(9%)	70,487	(1%)	499,637	(4%)	June 8, 1970–June 30, 1974
of Postsecondary Education.	——	—	48,000	(1%)	48,000	(0%)	Sept. 1, 1975–Nov. 30, 1976
	——	—	54,384	(1%)	54,384	(0%)	Feb. 1, 1974–July 31, 1975
	——	—	16,442	(0%)	16,442	(0%)	Dec. 1, 1973–Indefinite
	3,797,156	(83%)	5,814,438	(85%)	9,611,594	(84%)	
	526,329	(12%)	50,000	(1%)	576,329	(5%)	Dec. 1, 1969–Sept. 1, 1974
	——	—	576,832	(8%)	576,832	(5%)	July 1, 1975–June 30, 1979
	20,000	(0%)	——	—	20,000	(0%)	August 1972–Indefinite
	16,700	(0%)	——	—	16,700	(0%)	Jan. 17, 1972–Indefinite
	8,640	(0%)	——	—	8,640	(0%)	1971
	571,669	(12%)	626,832	(9%)	1,198,501	(10%)	
training.	230,847	(5%)	447,426	(6%)	678,273	(6%)	
	4,599,672	(100%)	6,888,696	(100%)	11,488,368	(100%)	
vision:							
	——	—	38,106	--	38,106	--	July 1, 1975–June 30, 1976
eau of Health Manpower.	——	—	674,928	—	674,928	—	Mar. 17, 1975–Sept. 16, 1976
	——	—	66,000	—	66,000	—	May 1, 1975–May 1, 1976
Management Division	——	—	779,034	—	779,034	—	
	4,599,672	--	7,667,730	—	12,267,402	—	

served by the NCHEMS Glossary, a compilation of standard definitions of terms used in NCHEMS products.

Project EXTENDING THE COMMUNICATION BASE

Objectives and strategies. The objectives are to extend the standardized language about postsecondary education to embrace the broader range of postsecondary education and categories of information for which standard definitions and procedures have not yet been developed.

Project INSTITUTIONAL DATA USES

Objectives and strategies. The objectives of this project are to enhance the state of the art with respect to institutional ability to utilize data in planning and management, to support institutional use of currently available data through development of appropriate analysis and interpretation products, and to develop analytic building blocks (both techniques and results) that can contribute to longrun product development.

Project INFORMATION EXCHANGE PROCEDURES FOR MAJOR RESEARCH UNIVERSITIES

Objectives and strategies. The major emphasis of this project will be to develop and implement a set of exchange procedures that will provide complex research university administrators with the types of comparative data they need to better carry out their planning and management responsibilities. Initially, the project will focus on the current set of information exchange procedures. Problem areas will be delineated and short-range solutions will be determined. Longer range solutions will be developed in other project areas and incorporated into this project when appropriate.

Project INSTITUTIONAL PRODUCTS IMPLEMENTATION ASSISTANCE

Objectives and strategies. This project will help institutions use NCHEMS products and help identify problem areas in these institutional products. The following objectives reflect these dual purposes: (1) To improve the planning and management functions of institutions of postsecondary education by providing assistance in the use of specific products; (2) to improve project research and development by maintaining contact with the institutional audience, which initiates comments, criticisms, and suggestions concerning the products.

Project INTRAINSTITUTIONAL PLANNING AND MANAGEMENT

Objectives and strategies. The overall objective of the project is to improve planning and management within institutions. The major objective is pursued through several subobjectives: (1) To help institutional administrators to understand internal program operations by identifying and organizing information about the resources, activities, and outcomes of programs; (2) to facilitate communication among the administrative levels of the institution; (3) to support the investigation of alternative resource utilization plans in academic units; (4) to assist in the definition of departmental goals and their relationship to the missions of the institution; and (5) to support understanding of faculty effort as the major resource of academic units and to encourage examination of the consequences of alternative approaches to faculty resource measurement.

Project OUTCOMES OF POSTSECONDARY EDUCATION

Objectives and strategies. The first objective is the identification, definition, collection, and dissemination of measures of educational outcomes. The second objective is to design a structure for organizing these outcomes which includes: (1) Develop a categorization scheme for classifying and organizing outcomes measures, (2) identify the different kinds of outcomes, (3) categorize the measures, and (4) provide procedures to array the measures in a logical and useful fashion.

Project RESEARCH ON PRODUCTIVITY AND RESOURCE ALLOCATION IN POSTSECONDARY EDUCATION

Objectives and strategies. The objectives are to search literature pertaining to productivity and resource allocation in postsecondary education; examine the concepts of productivity and resource allocation and their interrelationships; develop a conceptual framework for defining and describing productivity concepts; and identify topics unearthed in the research activities that are suitable for developmental work.

Project

STATE-LEVEL INFORMATION BASE

Objectives and strategies. The objective of this project is to work with State-level agencies to develop, pilot test, and implement an information base suitable for use in these agencies' postsecondary education planning activities. In developing this information base, these elements should be considered: (1) A common core of data should exist that all States may utilize, (2) each State should be able to include information unique to itself in addition to using common-core data, and (3) subsets of the common core should be defined and collected in the same way in all the States so that information could be compared across State lines.

Project

STATE POSTSECONDARY EDUCATION PLANNING MODEL

Objectives and strategies. The objective is to develop analytical tools to assist State planners and decisionmakers to assess the impact on students and institutions of alternative financing plans and resource allocations to determine which combination of resources best achieve desired goals. To permit the orderly development of this model the following products will be available: (1) A document describing the model concepts and design, (2) the software and software system documentation, (3) a users' guide detailing the applications of the model to several policy questions, (4) a document describing existing data sources specifically applicab to this model, and (5) a case study document summarizing the usefulness of the model as a planning and management tool. Fianlly, workshops and onsite training will be provided for States interested in using the model.

Project

STATEWIDE ANALYSIS

Objectives and strategies. The objective of this project is to develop analytical procedures to improve State resource allocation in higher education and to identify and use existing data in order to improve the quality of information upon which decisions are made.

Funding.

Fiscal year 1976 . . . . *$1,400,000

*Cumulative funding since 1972 for previous fiscal years was $4,178,511.

Monitoring history.

Dates	Project officer	Activities
December 1972-March 1973	Wilmer Cody	General monitoring.
March 1973-December 1974	Chester Neudling	February 1974, site visit by William Sullivan, Willie Price, and Ray Wormwood.
December 1974-October 1975	Gloria Scott	Mar. 5, 1975, site visit by Art Melmed, Glen Ingram, and Gloria Scott.
October 1975 to present	Richard Otte	January 1976, site visit and review, Jeff Schiller.

NORTHWEST REGIONAL EDUCATIONAL LABORATORY

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NORTHWEST REGIONAL EDUCATIONAL LABORATORY

Mission

Three major ideas have remained constant throughout the existence of the laboratory: (1) Development of quality educational products; (2) assistance with meaningful change in educational practice; and (3) strong cooperative, working relationships among agencies and institutions concerned with education.

In June 1975 the board adopted the following statement of purpose:

> "The mission of the Laboratory is to assist education, government, community agencies, business, and labor in bringing about improvement in educational programs and processes by—
>
> - Developing and disseminating effective educational products and procedures.
> - Conducting research on educational problems.
> - Providing technical assistance in educational problem solving.
> - Evaluating effectiveness of educational programs and projects.
> - Providing training in educational planning, management, and instruction.
> - Serving as an information resource on effective educational programs and processes."

The laboratory employs an interrelated four-part strategy for carrying out its mission. Three of these strategies represent categories of activities:

- Problem identification.
- Research and development.
- Marketing and dissemination.

The fourth strategy—interinstitutional relationships—represents a way of carrying out the other three.

Effective and appropriate change in schools and other educational institutions should be directed toward identified needs. Furthermore, research and development should be problem oriented.

The problem identification strategy is directed both to helping other institutions specify educational needs as a basis for their improvement efforts and focusing the R. & D. efforts of the laboratory on the solutions of educational problems.

The strategy for identifying problems involves conducting broad-scale surveys, obtaining information from people in individual institutions, assessing needs and attitudes of people from particular populations, providing technical assistance to others in identifying problems, and carrying out feasibility studies.

The value of research and development is increasingly recognized in efforts to effect educational change. It provides both a systematic method for arriving at decisions concerning how to meet educational needs and tested products and processes which can be used to implement decisions.

The laboratory uses systematic, field-based strategies to produce products and processes and to provide technical assistance to meet identified needs through the following activities: (1) Training, (2) development, (3) local modification, (4) field testing and evaluation, and (5) evaluation/assessment instruments and procedures.

To effect educational change it is important that the results of R. & D. be made available to educational practitioners in usable form. The laboratory strategy for moving R. & D. outputs to users combines dissemination strategies from the field of education and marketing strategies from the field of business and industry. Three features of the strategy particularly distinguish it from the commercial model:

- The strategy focuses on how best to meet an identified local need by providing alternative products and processes.
- Effective and needed products and processes are made available which would not be otherwise because of such factors as a low-volume potential (small target group or specialized need) and complexity of installing a sophisticated system.
- Technical assistance and services are provided to maintain an educational change after it is installed.

A close working relationship is maintained between the laboratory and other institutions to carry out the problem identification, R. & D., and marketing/dissemination strategies.

Laboratory policy established by the board of directors specifically provides that procedures for developing and implementing programs "shall provide for appropriate collaboration with State departments of education, private and public schools, colleges and universities, professional and civic organizations, Government agencies, businesses, and industries."

This is reflected by the involvement of other institutions in planning and carrying out laboratory work and by the encouragement of consortia for attacking common problems.

The establishment of laboratory program priorities is a two-part process:

- Determination of long-range educational needs.
- Adoption of an annual policy authorizing programs in priority areas of need.

The determination of long-range educational needs is based on several sources of information including national studies of educational needs, research findings, State and local assessment of needs, advisory groups focused on specific topics, educational leaders at large, and members of the laboratory staff. This broad involvement of institutions, organizations, and agencies helps assure the priority of programs, currency of needs, and relevance of developments and impact.

Experience has shown a high consistency between regional needs and national priorities. A strength of the laboratory has been to combine the two perspectives in its R. & D. work; that is, the development of nationally applicable processes and models and regional adaption for specific settings and target populations.

Governance

The laboratory is governed by a board of directors elected by the laboratory's member agencies. Board policy provides for the external review and evaluation of the laboratory and its programs by a consultant review panel composed of recognized experts in educational research and development and utilization of R. & D. in educational practice.

In addition policy boards and advisory committees are appointed for individual laboratory programs.

Management

The laboratory is organized into four programmatic divisions and an administrative support division. The organizational structure is shown in figure 1.

The executive director is responsible for establishing and implementing procedures for operation of the laboratory within the policies adopted by the board of directors. A cabinet has been established internally to advise and assist the executive director. The purposes of the cabinet are to review and discuss issues of a major policy or procedural nature, conduct special studies, make recommendations to the executive director relative to specific actions, and serve as a dissemination forum for institutional information.

Divisional councils serve as monthly forums to discuss items to be reviewed by the executive cabinet and other pertinent matters and as a means for disseminating information of laboratory concern and interest.

Policy/procedures review committees review and recommend new and revised policies and procedures in each of four areas: (1) Programs, (2) administration, (3) personnel, and (4) finance.

The associate director has primary responsibility for the planning process.

Board policy calls for the preparation and periodic revision of a long-range plan for the laboratory which presents the strategies for accomplishing the mission of the laboratory through multiyear projections of programmatic thrusts to meet current and projected educational needs. A long-range plan was adopted by the board in 1971 and is being revised for action by the board in June 1976.

The associate director coordinates an annual review of continuing programs with division directors. The results of the review, proposed changes, and program plans for the next contract year are reflected in revised program plans.

In addition, suggestions for new programs are fully explored. Feasibility studies may be recommended to fully investigate new program potential and should result in presentation of a program plan.

Based on this planning, each division director prepares a fiscal-year plan including a list of substantive program and project areas, projected rate of business based on contracts already signed and highly probable, and target rate of business based on the projected rate of business plus other contracts the division plans to pursue within substantive areas listed.

These plans are reviewed by the executive director and modified as needed.

The associate director is responsible for coordination of resource development for the implementation of annual plans.

The following responsibilities are assigned for the management of contract activities:

- Maintaining management and control files to assure contract performance--program/project director.
- Monitoring contract provisions and performance--division director.
- Maintaining institutional contract files--contracts officer.
- Preparing program/project accounts materials--director of administrative services.
- Conducting review of progress and reporting to executive director--associate director.
- Reporting quarterly cost/progress to board of directors--executive director.

The review of program/project progress by the associate director is conducted at least quarterly. The scope of the review includes analysis of cost-progress reports to determine reasons for variance from plans, projection of activities for the coming period and estimates of problems in reaching planned accomplishments or cost objectives, and analysis of problems and issues concerning the program/project.

The cost-progress reporting system provides a comparison of the planned, with the actual, accomplishment in terms of two types of data for each work unit of a program: (1) Budget and (2) program events. A calendar grid is utilized to plot projected expenditures and events. At the end of each quarter, or other time period, the actual costs and events completed are recorded. Progress is thereby indicated in both fiscal and programmatic terms. Review of the reports generated by this system permits informed management decisions for the completion of the contract goals.

The evaluation of laboratory products and services is an integral part of the RDD strategy. Activities include both formative evaluation designed to provide information to guide staff in the development process and summative evaluation to assess how use of the product affects the target population.

Evaluation specialists who are members of each program staff have primary responsibility for designing and implementing evaluation plans, including establishment of objectives, instrumentation, data collection, analysis, and reporting.

An internal peer review system is used to review evaluation designs and reports for appropriateness and quality.

Program directors have primary responsibility for monitoring evaluation activities, including outside reviews. Monitoring by division directors is on a discrepancy basis.

The marketing and dissemination of laboratory products and services also is an integral part of the RDD strategy. Marketing designs are built into each program, with the office of marketing and dissemination providing specialized assistance and quality control. Coordination between programs and the office is provided by the designation of a staff member in each program for marketing and dissemination liaison.

Program staff members have primary responsibility for designing and implementing marketing plans. The office of marketing and dissemination provides assistance in technical areas such as copyright, production, and sales.

The office of marketing and dissemination is responsible for coordinating the application of laboratory quality standards for individual products.

The office of marketing and dissemination coordinates promotional activities, execution and monitoring of publisher agreements, and marketing of products and services beyond the life of an individual program.

Staff Total laboratory staff varies as contract work is completed or new contracts are received. As of March 1, 1976, the full-time staff totaled 162, including 110 professional and technical staff and 52 support staff. Of this total, 45 were in general and administrative units, 12 in cost centers (media center and computer center), and 105 in programs and projects.

Figure 1. Organizational structure

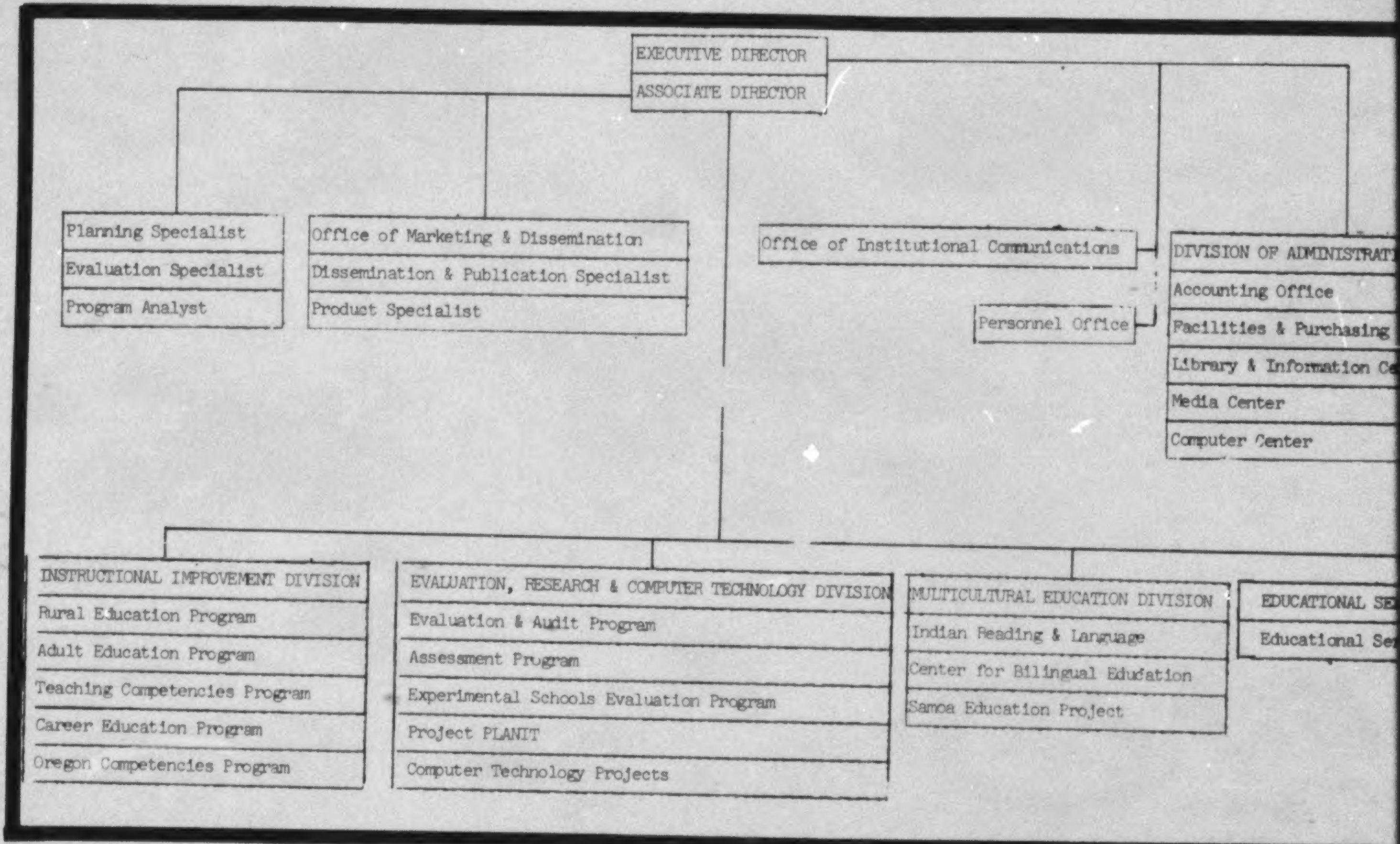
EXECUTIVE DIRECTOR
ASSOCIATE DIRECTOR
Planning Specialist
Evaluation Specialist
Program Analyst
Office of Marketing & Dissemination
Dissemination & Publication Specialist
Product Specialist
Office of Institutional Communications
Personnel Office
DIVISION OF ADMINISTRAT
Accounting Office
Facilities & Purchasing
Library & Information Ce
Media Center
Computer Center
INSTRUCTIONAL IMPROVEMENT DIVISION
Rural Education Program
Adult Education Program
Teaching Competencies Program
Career Education Program
Oregon Competencies Program
EVALUATION, RESEARCH & COMPUTER TECHNOLOGY DIVISION
Evaluation & Audit Program
Assessment Program
Experimental Schools Evaluation Program
Project PLANIT
Computer Technology Projects
MULTICULTURAL EDUCATION DIVISION
Indian Reading & Language
Center for Bilingual Education
Samoa Education Project
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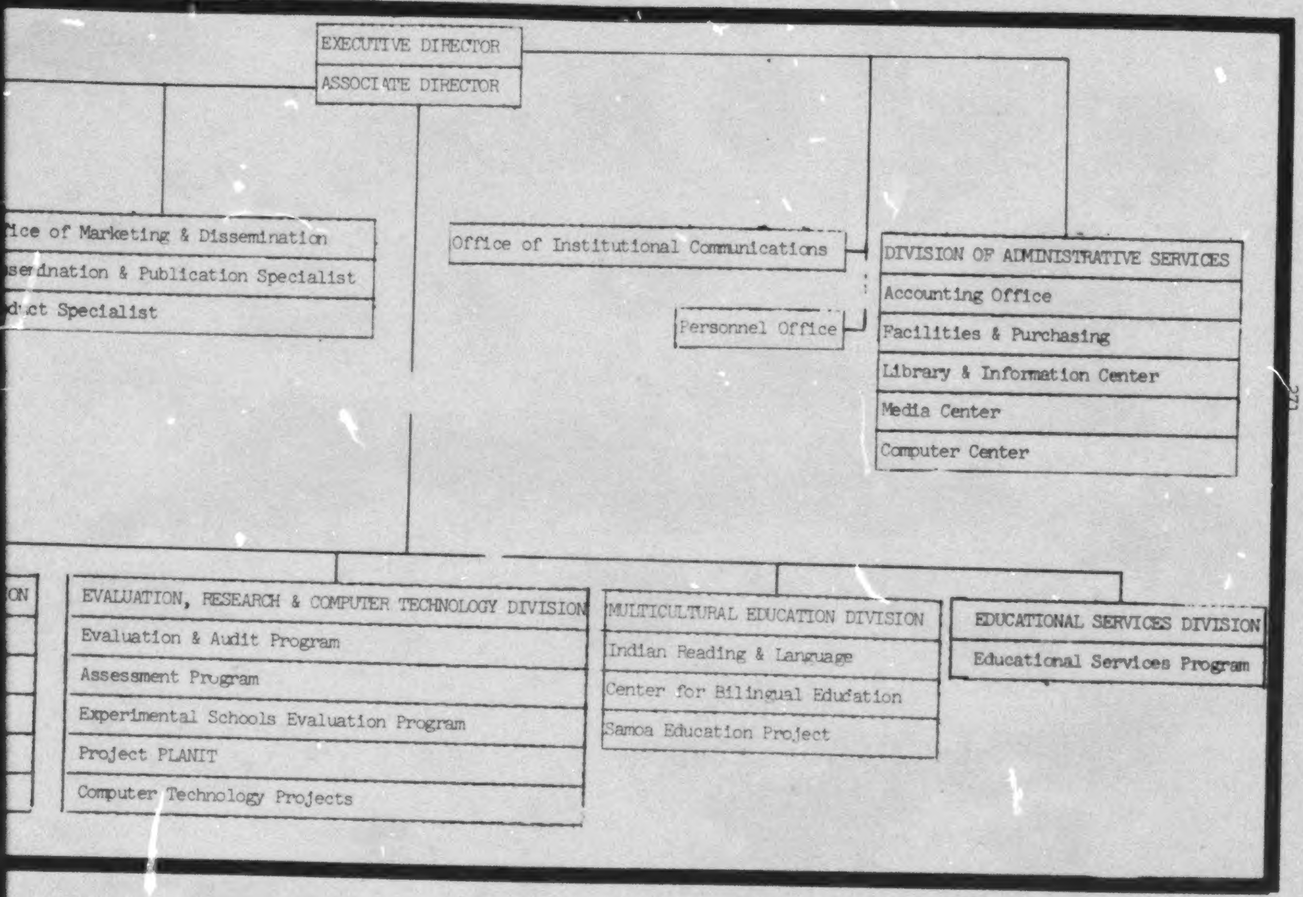
Figure 1. Organizational structure


EXECUTIVE DIRECTOR
ASSOCIATE DIRECTOR
ice of Marketing & Dissemination
semination & Publication Specialist
duct Specialist
Office of Institutional Communications
Personnel Office
DIVISION OF ADMINISTRATIVE SERVICES
Accounting Office
Facilities & Purchasing
Library & Information Center
Media Center
Computer Center
ON
EVALUATION, RESEARCH & COMPUTER TECHNOLOGY DIVISION
Evaluation & Audit Program
Assessment Program
Experimental Schools Evaluation Program
Project PLANIT
Computer Technology Projects
MULTICULTURAL EDUCATION DIVISION
Indian Reading & Language
Center for Bilingual Education
Samoa Education Project
EDUCATIONAL SERVICES DIVISION
Educational Services Program

Staff Development

Board policy provides for the design and implementation of a systematic plan to provide staff members in all classification with opportunities to increase their capabilities for fulfilling laboratory responsibilities and for personal growth. Appropriate activities include course work, study or training at other institutions, professional growth activities within the laboratory, laboratory-related work at other sites, and staff-development activities initiated by individua staff members.

In addition, the laboratory's affirmative action plan identifies staff development as one of the means of developing females and minorities for top-level positions.

Training Provided to Others

Varied training is provided as a part of the laboratory's research and development contract work.

More than 800 workshops and training sessions were conducted during 1975 by the laboratory staff and by other institutions using materials and procedures. Participants in this training included 5,200 teachers and administrators in elementary and secondary schools, 3,300 teachers of adults, and 1,800 instructors in community manpower programs.

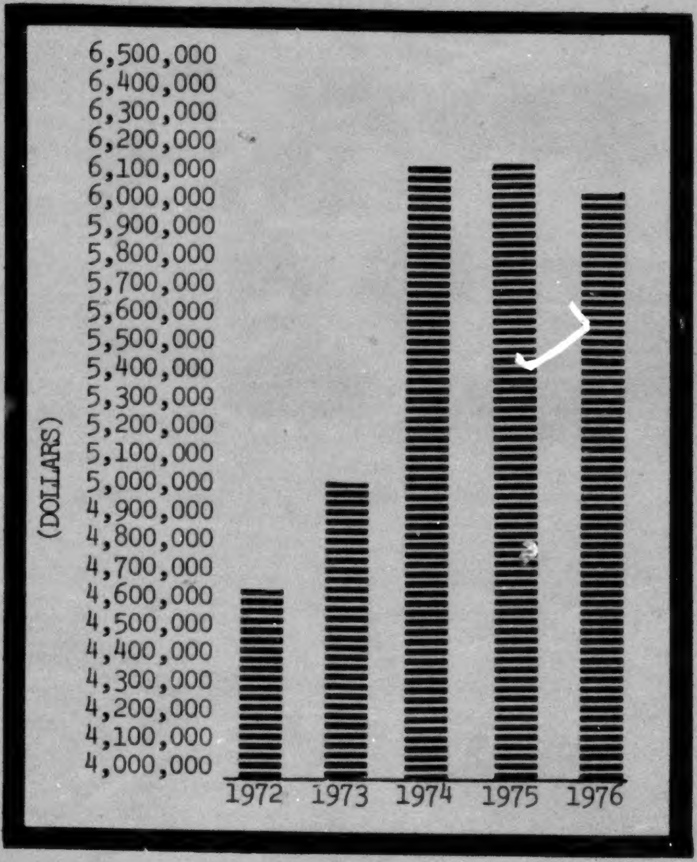
Institutional Relationships

Staff and students from schools, colleges, State, and local agencies work with the laboratory in planning and setting institutional policies, identifying educational needs, designing and developing materials and methods to meet identified needs, evaluating the effectiveness of products develope and helping disseminate and install proven products in

Several formal relationships exist between the laboratory and other institutions. The laboratory's corporate bylaws provid for institutional memberships and 820 institutions have forma ly affiliated with the laboratory. Among the members of the board of directors are chief school officers (or representati from each State or territorial department of education holding a membership or an associate membership in the laboratory.

Working relationships are maintained with other R. & D. insti tutions through membership in such associations as CEDaR, and through participation in such activities as joint dissemination efforts with the Far West Laboratory, CEMREL, and the Wisconsin R. & D. Center.

Table 1. Funding history



The laboratory also works cooperatively with such dissemination efforts as the National Diffusion Network.

The chief State school officers from the Northwest and the Pacific meet informally each quarter at the NWREL headquarters to discuss common needs and problems with staff from the laboratory, Region X Office of USOE, and other agencies.

The laboratory assists and participates in activities of professional associations such as the Oregon ASCD, Alaska Education Association, Montana School Administrators Association, etc.

Facilities

The laboratory headquarters occupies 50,000 square feet of modern office space in downtown Portland, Oreg. Field offices are established as needed to carry out contract work.

A media center provides printed, audio, and visual materials.

The data-processing center maintains a staff of keypunchers, programers, and other computer personnel to work with the research and evaluation staff. Formal arrangements with the Bonneville Power Administration, Washington State University, and Oregon State University provide access to a wide range of computer hardware and services, both direct and through terminals at the laboratory.

The laboratory's information center includes the complete ERIC (Educational Resources Information Center) collection and has access to 20 additional information bases through the Lockheed retrieval system.

CURRENT NIE PROJECTS

Project

EXPERIMENTAL SCHOOLS EVALUATION PROGRAM

Objectives and strategies. To document and evaluate the 5-year experiment in the Franklin Pierce School District. This experiment attempts to make significant alterations in the total school program including the curriculum, school district organization and governance, the use of time and space, and the involvement of the community. Four types of studies are being carried out:

- Organizational Analysis Studies: These studies contribute to understanding of the governance and management of schooling, and particularly of schooling in the Franklin Pierce School District as impacted by the Experimental Schools project (ESP).
- Community Studies: These studies contribute to understanding the relationships between the Franklin Pierce school system and the community which it serves throughout the life of the ESP. The NWREL research attempts to gather information pertinent to (1) the impact of ESP practices on parents and (2) the impact of parents on the development and maintenance of the ESP.
- Instructional Environment Studies: The studies contribute to understanding the contextual nature of instruction in the Franklin Pierce School District. They focus on (1) the structural characteristics of major instructional programs present in the Franklin Pierce District, (2) the relationship between the instructional organization within the school and the social organization of students, and (3) the impact on student growth (both affective and cognitive) of particular instructional factors (e.g., teaching styles) and selected student characteristics (e.g., cognitive styles).
- Student Impact Studies: These studies contribute to understanding the impact of the Experimental Schools project upon the instructional outcomes of students, both cognitive and affective domains. The student impact studies also consider the instructional environment and the entry characteristics of students in an attempt to understand better the observed impact of the ESP.

Status. The Franklin Pierce project is scheduled to end June 30, 1976, and the NWREL evaluation on August 31, 1976.

Funding.

June 30, 1971-Dec. 31, 1973.	$523,236
Jan. 1, 1974-Aug. 31, 1976	897,803
Total	1,421,039

Accomplishments. The NWREL evaluative research team has thus far developed 25 research documents, which have been thoroughly and professionally critiqued for technical and substantive adequacy within the institute or by external reviewers.

Monitoring history.

Dates	Project officer	Activities
Jan. 1, 1972-Mar. 1, 1973	David Budding	4 site visits.
Apr. 1-Sept. 1, 1973	Jeffrey Schiller	5 site visits. 4 visits to NIE by project personnel.
Apr. 1, 1973-Apr.30, 1975	Raymond T. Coward	5 site visits. 3 visits to NIE by project personnel.
Apr. 30-Dec. 31, 1975	Russell Mullens	3 site visits.. 6 visits to NIE by project personnel.
Jan. 1, 1976 to present	Norman Gold	2 visits to NIE by project personnel.

Project RURAL EDUCATION PROGRAM

Objectives and strategies. The goal of the Rural Education program is to develop, test, refine, and diffuse a strategy for improved citizen and educator participation in educational problem solving in rural communities. The strategy--called the Rural Futures Development Strategy--emerged through a process of research synthesis, specification design, development, and iterative evaluation and refinement.

Status. During contract years (CY) 1973-74, the components of the strategy were developed, evaluated in a preliminary way, and revised. Beginning late in CY 1974, the essential components were integrated. In CY 1975, a major installation was initiated in Utah; and early in CY 1976, a second major installation was begun in Washington State. Evaluation data are being gathered in both sites. In CY 1977 the strategy will be revised on the basis of evaluation results. A diversified diffusion plan has been developed to orient potential users to the program.

Funding.

Fiscal year 1973 (contract year) 1973-74	$1,948,547
Fiscal year 1975	1,049,734
Fiscal year 1976	768,000
Fiscal year 1977 (projected)	485,000
Total	4,251,281

Accomplishments. A set of structures, procedures, and skills used by rural citizens and educators to identify and attack the most pressing problems facing their schools and communities has been developed. The strategy is grounded in research and practical experience from a number of fields--community organization, organization development, rural sociology, social-change theory, political science, and management science. A unique feature of the strategy is its systematic attention to increasing and improving participation by both citizens and educators, and to the dynamics of the relationship between them. In addition, the project has developed a technical assistance and training capability for delivery of the strategy, and a set of prototype products used in strategy delivery:

- RFD Guide for Training School-Community Process Facilitators.
- RFD Manual for School-Community Process Facilitators.
- RFD Strategy Descriptions.
- RFD Guide for Schools.
- RFD Guide for School Boards.
- RFD Notebook for School-Community Groups.

Specifications for the RFD Guide for Support Agencies have also been developed.

The strategy has been installed in San Juan County, Utah. Two predominantly Navajo school-community groups have identified the need for high schools in their sections of the Navajo Reservation as their greatest problem. Each has developed a set of educational programs and facilities plans for its school, and each has secured the San Juan School Board's approval of its plans. A second major installation of the strategy has just begun in the State of Washington.

Monitoring history.

Dates	Project officer	Activities
Nov. 1972-	Lila Carol	General monitoring.
June 6-21, 1974	George Carnett	General monitoring.
June 21-24, 1974	Saul Yanofsky	General monitoring.
June 24-Sept. 18, 1974	Jon Schaffarzick	July 15-17, 1974, site visit. Sept. 4-6, 1974, major review.
Sept. 18, 1974 to present	Charles Thompson	Sept. 4-6, 1974, major review. Dec. 16-20, 1974, site visit. Apr. 14-17, 1975, site visit and conference with OE Region X staff, Northwest CSSO's. June 8-10, 1975, visit to Utah installation. June 11-17, 1975, site visit.

Project INTERCULTURAL READING AND LANGUAGE DEVELOPMENT

Objectives and strategies. The goal of this program is to increase the effectiveness of reading and language instruction for children from different cultural backgrounds. In order to increase Northwest Indian children's interest in language arts activities, skills in specific language arts activities, and feelings of competence relative to the language arts activities, the school program will—

- Use a community-based process to develop a set of culturally authentic and appropriate reading materials for grades 1-3.

- Prepare school staff to use culturally appropriate teaching activities.

Status. NWREL proposed the project to USOE in 1972 and was subsequently funded. In 1973 the project was transferred to NIE, bilingual task force, office of research, and in 1974, to the multicultural/bilingual division of the Educational Equity Group.

Funding.

Fiscal year 1974	$403,000
Fiscal year 1975	470,416
Fiscal year 1976	400,000
Total	1,273,416

Accomplishments. The following materials are being developed by 13 tribes in 4 States and are being tested at 3 locations:

Participating tribes	Materials being developed	Test sites
Plains area: Blackfeet Crow Northern Cheyenne	40 books, games, puzzles, filmstrips	Browning, Mont.
Plateau area: Flathead's Salish and Kootenai Fort Hall's Shoshone and Bannock Warm Springs	20 books	Warm Springs, Oreg.
Coast area: Quinault Skokomish Lummi Jamestown Clallam Muckleshoot	30 books and curriculum materials	Ferndale, Wash.

Monitoring history.

Dates	Project officer	Activities
June 1974	Wederath/Lohman	Review materials, site visit.
July 1975	Schotta	1-day lab visit.
December 1975	Lohman	Evaluation design.

Project OREGON COMPETENCY-BASED EDUCATION PROGRAM

Objectives and strategies. The goal of this program is to facilitate the effective and efficient implementation of competency-based education (CBE) and to study the effects of CBE on students and schooling. To assist schools in implementing CBE, this program will--

- Develop materials, procedures, and services to help educators meet the technical requirements implied in the revised Oregon Minimum Standards for Public Schools, which call for CBE.
- Field test materials and procedures in Oregon school settings, and then make them available to local and national educators.

In order to generate information on public policy issues related to implementation of competency-based education, the program will

- Examine how districts implement competency-based education programs and analyze the decisionmaking and organizational effects of varying approaches to CBE implementation.
- Examine effects on pupil behavior as CBE programs are installed and integrated in ongoing school operations.

Status. A planned 5-year program began in November 1975.

Funding.

Contract year 1976	$800,000

Accomplishments. State-of-the-art papers, developmental products, and research designs are currently in working draft form. They are scheduled for completion by October 31, 1976.

Monitoring history.

Dates	Project officer	Activities
Dec. 14-19, 1975	Paul Cawein	Site visit.
Dec. 15-23, 1975	William Spady	Site visit.
Jan. 23-Feb. 10, 1976	William Spady	Site visit.
Feb. 8-11, 1976	Paul Cawein	Site visit.
Feb. 9-10, 1976	Tommie Tomlinson	Site visit.
Feb. 22-27, 1976	Michael Cohen	Site visit.
Feb. 22-24, 1976	Steve Olejnik,	Site visit.
Apr. 4-7, 1976	Project staff, 9 consultants, 5 NIE representatives	Site visit.

Project COMPUTER TECHNOLOGY PROGRAM

Objectives and strategies. The goal of this program is to facilitate the integration of appropriate and efficient computer usage in educational institutions. Further, the program seeks to—

- Provide educators the opportunity for training both in using available computer applications and in actively participating in decisions which shape technology for education and the implementation of that technology.

- Increase the instructional use of computers as a problem-solving tool and the study of computers as an object of instruction.
- Define and design an information system which will be appropriate for educational needs brought on by new educational programs.
- Add to the knowledge base regarding the use of computers in education.
- Provide technical assistance to institutions, organizations, and agencies utilizing computer technology.
- Provide training in educational planning and management using computer technology.

Status. Program work was begun in 1968. The contract expires in 1977.

Funding.

Fiscal year 1976	$50
Fiscal year 1975	56
Fiscal year 1974	294
Fiscal year 1973	198
Fiscal year 1972	210
Total	808

Accomplishments. Three courses in using computers for instruction and school administration have been completed with total sales of 15,967 copies over 3½ years. Two additional courses are in the final stage of preparation for publication. A career-education course in computer occupations was published in spring of 1976 by Prentice-Hall, Inc. Curriculum units in energy/environment have been developed and are undergoing testing.

Monitoring history.

Dates	Project officer	Activities
July 1972- January 1973	Richard B. Otte	General monitoring.
October 1972	Richard B. Otte	Site review.

Dates	Project officer	Activities
January 1973-May 1974	Richard Harbeck	General monitoring.
February 1973	Richard Harbeck	Site review.
May 1974-75	Glenn Ingram	General monitoring.
June 1974	Glenn Ingram	Site review.
May 1975 to present	Richard B. Otte	General monitoring.

Project EXPERIENCE-BASED CAREER EDUCATION PROGRAM

Objectives and strategies. The objective of this program is to develop a comprehensive and personalized program for high school youth relying on community participation—employers, unions, public agencies, schools, parents. The basic assumption is that, for some students, academic, career, and personal learning are best fostered through extensive contact with adults in work situations.

The strategies of the program have been to develop an Experience-Based Career Education (EBCE) model, to evaluate this model, and to support national installation of the EBCE model. To these ends, the following activities have been developed:

- Design alternative program for high school juniors and seniors using community sites for learning life skills, basic skills, and career-development skills.
- Develop the model at a suburban-rural site.
- Conduct formative evaluation at the development site.
- Evaluate effectiveness of the model at pilot sites and demonstration (part D) sites.
- Evaluate individual materials packages and training seminars.
- Utilize development and pilot sites for demonstration and training.
- Provide materials, training, and technical assistance to adopting sites.

Status. This project is well into the implementation stage, with the contractor working with LEA's to test implementation strategies.

Funding.

Fiscal year 1974	$989,096
Fiscal year 1975	836,062
Fiscal year 1976	749,846
Total	2,575,004

Accomplishments. An EBCE model program has been developed and is being evaluated at five sites. National dissemination is beginning. Four comprehensive reference handbooks covering essential details of the EBCE program were prepared in final form. The handbooks cover--

- Management and organization.
- Curriculum and instruction.
- Employer/community resources.
- Student services.

Three packages of EBCE-tested materials have been prepared for use in any setting where young people are exposed to community resources as part of their educational program. "The Competencies" suggest how communities can identify and certify student performance of "survival skills," "The Student Career Journal" provides a mechanism for student practice of written communication and self-reflection with the help of an adult, and "Career Explorations" provides a process for helping students analyze jobsites for both career and academic growth.

Indepth training in essential EBCE procedures is provided through short workshops on establishing employer networks, analyzing site learning potential, and designing individual student learning projects.

The demonstration and training center is located at Tigard, Oreg. Pilot sites have been established at Hillsboro, Oreg.; Colville, Wash.; Kennewick, Wash.; Kodiak, Alaska; and Billings, Mont. The laboratory is providing training and technical assistance to demonstration projects under part D of the Vocational Education Act.

Monitoring history.

Dates	Project officer	Activities
July 1972-July 1973	Harold Johnson	Quarterly meetings of program directors, quarterly site visits.
July 1973-September 1974	Thomas Israel	Quarterly meetings of program directors, quarterly site visits.
September 1974-May 1975	John O'Brien	Quarterly meetings of program directors, quarterly site visits.
May 1975-May 1976	Ronald Bucknam	6 meetings of program directors, 2 site visits.

Project IMPROVING TEACHING COMPETENCIES PROGRAM

Objectives and strategies. The goal of this program is to increase the capabilities of educators to (1) encourage pupils to be active learners; (2) use teaching techniques that help students learn and make personal use of what they learn; (3) use problem-solving processes to deal with organizational and classroom issues and to deal with social conflict; (4) use basic interpersonal, group processes and organizational development skills; and (5) provide for organizational growth and change by developing internal educational training consultants.

This goal is being accomplished by developing a set of interrelated instructional systems and by facilitating their installation, adaptation, and use as inservice workshops and preservice courses.

Status. The final instructional systems in a set of 13 will near completion in November 1976 and a National dissemination strategy is being developed.

Funding.

Fiscal year 1973	$815,000
Fiscal years 1974-76	2,782,000
Total	3,597,000

Accomplishments. Development of 10 instructional systems has been completed:

- Facilitating Inquiry in the Classroom.
- Research Utilizing Problemsolving (classroom and administrator versions).
- Interaction Analysis.
- Interpersonal Communications.
- Systematic and Objective Analysis of Instruction.
- Development of Higher Level Thinking Abilities.
- Interpersonal Influence.
- Skills Training (PETC I).
- Consultation Training (PETC II).

Instructional systems near completion are:

- Organizational Development (PETC III).
- Social Conflict and Negotiative Problemsolving.
- Relevant Explorations in Active Learning.

More than 56,000 teachers and administrators have participated in courses and workshops utilizing the materials.

Monitoring history.

Dates	Project officer	Activity
August 1972-December 1972	William Cody	Periodic phone calls and correspondance.
December 1972-March 1973	Mary Johnson	General monitoring.
March 1973-September 1973	Virginia Koehler	1 site visit by Garry McDaniels.
September 1973-November 1974	Susan Klein	Examination of products by 2 NIE staff.
November 1974-December 1975	Francis Sobol	General monitoring.
December 1975 to present	Samuel Pisaro	July 1976, site review with Judith Lanier, Dixie Wilkerson, Carolyn Lowman, Joseph Pascarelli, and Samuel Pisaro.

Table 2. Current non-NIE projects

Project	Objectives and strategies	Status	Funding	Accomplisnme
Adult Education Program	The goal of this program is to increase capabilities of people who provide educational opportunities for adults. In order to encourage cooperative interstate efforts, the project will form a regional consortium among the Alaska, Idaho, Oregon, and Washington State Education Agencies; University of Alaska; Idaho State University; Oregon State University; Washington State University; and NWREL; provide training activities for adult educators by arranging university courses, workshops, and individualized technical assistance; and develop curriculum and training materials in areas of special needs. A four-State staff-development program was begun in 1972 and continued for 3 years under USOE contract. In 1975 funds were allocated directly to the State education agencies, which subcontracted to the laboratory for continuation of the regional coordination function. Adult counselor training materials were developed during 1973-75 under a 16-month USOE contract.		OE: Fiscal year 1972. . $71 Fiscal year 1973. . 176 Fiscal year 1974. . 277 Fiscal year 1975. . 142 State/local: Fiscal year 1975. . 35 Fiscal year 1976. . 72 Total. 773	During the 3 years the gram was funded by USO and technical assistan ed to the following ad 1,459 in 1972-73, 1,13 and 2,700 in 1974-75. A modularized counselo program was developed to 500 adult educators through dissemination
Evaluation and Audit Program	The goal of this program is to provide evaluation services to improve educational practices and enhance	The program was established in 1970 in response to needs expressed by chief State school officers of the	State/local: Fiscal year 1972. . $84 Fiscal year 1973. . 136	The various types of e sistance listed above vided to more than 160

Table 2. Current non-NIE projects

ves and strategies	Status	Funding	Accomplisnments
this program is to in- ilities of people who ational opportunities encourage cooperative fforts, the project will nal consortium among the o, Oregon, and Washing- ducation Agencies; Uni- Alaska; Idaho State Uni- gon State University; tate University; and de training activities ucators by arranging ourses, workshops, and ed technical assistance; curriculum and training areas of special needs. staff-development pro- un in 1972 and continued under USOE contract. In ere allocated directly education agencies, tracted to the labora- tinuation of the re- ination function. elor training materials ped during 1973-75 under USOE contract.		OE: Fiscal year 1972. . $71 Fiscal year 1973. . 175 Fiscal year 1974. . 277 Fiscal year 1975. . 142 State/local: Fiscal year 1975. . 35 Fiscal year 1976. . 72 Total. 773	During the 3 years the regional program was funded by USOE, training and technical assistance was provided to the following adult educators: 1,459 in 1972-73, 1,134 in 1973-74, and 2,700 in 1974-75. A modularized counselor-training program was developed and introduced to 500 adult educators nationally through dissemination workshops.
this program is to pro- ion services to improve practices and enhance	The program was established in 1970 in response to needs expressed by chief State school officers of the	State/local: Fiscal year 1972. . $84 Fiscal year 1973. . 136	The various types of evaluation assistance listed above have been provided to more than 160 local projects

Project	Objectives and strategies	Status	Funding	Accomplish
	problem-solving skills of educators. The objectives and strategies of the program include conducting third-party evaluations, providing evaluative consultation, providing consultation in planning, conducting technical reviews, conducting investigatory research, conducting accomplishment auditing, conducting evaluation training, and conducting monitoring/audit training.	region. Evaluation assistance is provided to education projects on a contract basis.	Fiscal year 1974. ,$216 Fiscal year 1975. . 160 Fiscal year 1976. . 251 Total. 847	conducted by the fol in the past 5 years. 1971-72: 13 loca agencies, 3 State agencies, 1 inter tion agency, 1 sp center. 1972-73: 14 loca agencies, 3 inter tion agencies. 1973-74: 16 local agencies, 4 State agencies, 2 interm tion agencies, 2 u 1974-75: 18 local agencies, 5 interm tion agencies, 1 S agency, 2 universit leges, 1 hospital, organization. 1975-76: 15 local agencies, 6 interm tion agencies, 4 St agencies, 3 univers leges, 2 nonprofit 1 hospital, 1 city
Assessment Program	The goal of this program is to increase the effectiveness of the assessment of student performance. To assist in planning, designing, and	The program was established in 1974 in response to needs expressed by chief State school officers of the region to provide assistance in the	State/local: Fiscal year 1974. .$122 Fiscal year 1975. . 383	Assistance in statewid has been provided to f cation agencies. Test efforts have been orga

tives and strategies	Status	Funding	Accomplishments
olving skills of educators. tives and strategies of the nclude conducting third- luations, providing evalua- ultation, providing consul- planning, conducting reviews, conducting in- ry research, conducting nment auditing, conducting n training, and conducting g/audit training.	region. Evaluation assistance is provided to education projects on a contract basis.	Fiscal year 1974. .$216 Fiscal year 1975. . 160 Fiscal year 1976. . 251 Total. 847	conducted by the following agencies in the past 5 years. 1971-72: 13 local education agencies, 3 State education agencies, 1 intermediate education agency, 1 special education center. 1972-73: 14 local education agencies, 3 intermediate education agencies. 1973-74: 16 local education agencies, 4 State education agencies, 2 intermediate education agencies, 2 universities. 1974-75: 18 local education agencies, 5 intermediate education agencies, 1 State education agency, 2 universities, 2 colleges, 1 hospital, 1 nonprofit organization. 1975-76: 15 local education agencies, 6 intermediate education agencies, 4 State education agencies, 3 universities, 2 colleges, 2 nonprofit organizations, 1 hospital, 1 city government.
f this program is to in- effectiveness of the as- f student performance. To planning, designing, and	The program was established in 1974 in response to needs expressed by chief State school officers of the region to provide assistance in the	State/local: Fiscal year 1974. .$122 Fiscal year 1975. . 383	Assistance in statewide assessments has been provided to four State education agencies. Test-collection efforts have been organized through

Project	Objectives and strategies	Status	Funding	Accomplishment
	implementing statewide assessment programs the program will work with State education agencies to design and implement plans which meet the unique needs of the population served, and analyze results and prepare reports to help legislators, board of education representatives, and administrators make informal decisions about educational programs. In addition, it will provide educators access to tests for assessing performance by collecting, evaluating, and disseminating nontraditional applied performance testing and assessment materials, and assisting in the application of test materials and procedures. Further, tests will be developed for meeting the needs of special target groups.	assessment of student performance. Services are provided on a contract basis, primarily to State education agencies.	Fiscal year 1976. . 381 Total 886	operation of a clearing applied performance tes cial assessment needs h focused primarily on mu populations.
Project PLANIT (Programing Language for Interactive Teaching)	The goal of this project is to facilitate the use of computer-based instructional materials on time-sharing systems. A computer language will be developed which can be used on a variety of different computers. PLANIT will revise, reproduce, and make available materials for installation and use of the language; assist educational institutions in installation of the language; and modify the language for use by other agencies and institutions, particularly the Department of Defense. In	The development of the PLANIT language of computer-assisted instruction began at System Development Corp., with primary support from the National Science Foundation. In 1973 the completion and debugging of the computer language was undertaken at NWREL. Potential application of PLANIT for instruction of military personnel resulted in additional development work with support from the Army Research Institute, as well as pilot installation at military bases.	DOD: Fiscal year 1976. .$168 Fiscal year 1974. . 65 NSF: Fiscal year 1973. . 59 Fiscal year 1975. . 58 Other: Fiscal year 1976. . 8 Total. 358	Debugging of the PLANIT language was completed produced to facilitate The system has been ins some 50 universities an installations.

es and strategies	Status	Funding	Accomplishments
statewide assessment program will work with ion agencies to design plans which meet the of the population nalyze results and pre- to help legislators, ation representatives, rators make informal de- educational programs. it will provide edu- to tests for assessing by collecting, evalu- sseminating nontradi- d performance testing t materials, and as- e application of test procedures. Further, developed for meeting special target groups.	assessment of student performance. Services are provided on a contract basis, primarily to State education agencies.	Fiscal year 1976. . 381 Total 886	operation of a clearinghouse for applied performance testing. Special assessment needs have been focused primarily on multicultural populations.
his project is to faci- e of computer-based in- aterials on time-shar- A computer language loped which can be used of different computers. evise, reproduce, and e materials for in- d use of the language; ional institutions in of the language; and nguage for use by other institutions, particu- artment of Defense. In	The development of the PLANIT language of computer-assisted instruction began at System Development Corp., with primary support from the National Science Foundation. In 1973 the completion and debugging of the computer language was undertaken at NWREL. Potential application of PLANIT for instruction of military personnel resulted in additional development work with support from the Army Research Institute, as well as pilot installation at military bases.	DOD: Fiscal year 1976. .$168 Fiscal year 1974. . 65 NSF: Fiscal year 1973. . 59 Fiscal year 1975. . 58 Other: Fiscal year 1976. . 8 Total. 358	Debugging of the PLANIT computer language was completed and materials produced to facilitate dissemination The system has been installed at some 50 universities and military installations.

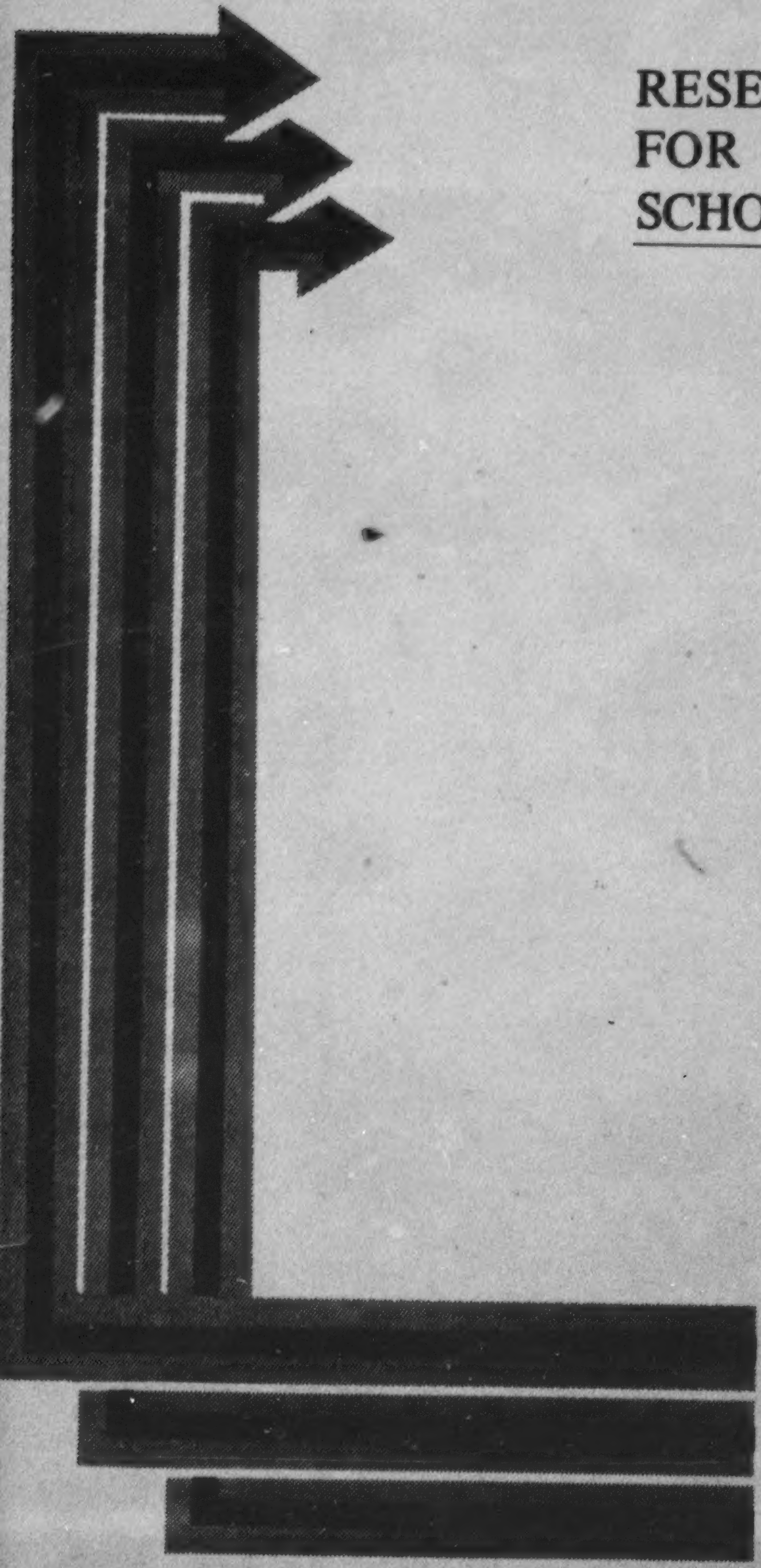
Project	Objectives and strategies	Status	Funding	Accomplishme
	addition, further research and development work will add additional capabilities to the language.			
Bilingual Education Center	To assist schools in providing equal educational opportunity for students whose native language is other than English, the center will provide technical assistance to schools having significant bilingual/multicultural student populations. Assistance will be provided in the areas of assessment of specific local needs; staff training; school-community problem-solving; modifying administrative structures and procedures; and adaptation, development, and evaluation of curriculum materials and techniques. Guides for enhancing bilingual education in local communities will be developed.	The center is one of nine established across the United States in response to the Supreme Court's Lau v. Nichols decision. Activities are projected for 5 years.	Fiscal year 1975.. $15 Fiscal year 1976.. 387 Total 402	More than 62,000 chi limited English-spea in the Northwest and may benefit from tec tance activities of Assistance is design strengthen the capabi school-district staf in meeting needs in ties. Administrator paraprofessionals, a the community are bei language dominance-p testing of limited-E ing children, curricu tion, school-communit and teaching techniqu
Pacific Islands Program (Samoa/Guam/Trust Territory)	To increase the effectiveness and appropriateness of educational programs in the U.S. territories of the Pacific, this program will provide technical assistance to educators in Guam, American Samoa, and the Trust Territory of the Pacific Islands in the areas of planning, evaluation, and management, and develop culturally appropriate curriculum materials.	Activities in the Pacific were initiated in 1968 under a contract with the University of Guam. Subsequently assistance has been provided to the Department of Education of both Guam and the Trust Territory. Technical assistance to American Samoa began in 1973.	Territorial DOE's: Fiscal year 1972..$318 Fiscal year 1973.. 233 Fiscal year 1974.. 98 Fiscal year 1975.. 130 Fiscal year 1976.. 90 Total. 869	Technical assistance the laboratory has h short-term and long-t (1) Planning, evaluat management of specifi funded projects is im (2) local educators i skills in these areas cation to future effo

and strateqies	Status	Funding	Accomplishments
her research and de- will add additional the language.			
ls in providing equal portunity for students nguage is other than nter will provide tance to schools hav- bilingual/multi- t populations. As- e provided in the ment of specific aff training; school- em-solving; modify- ive structures and adaptation, develop- ation of curriculum echniques. ncing bilingual edu- communities will be	The center is one of nine established across the United States in response to the Supreme Court's Lau v. Nichols decision. Activities are projected for 5 years.	Fiscal year 1975.. $15 Fiscal year 1976.. 387 Total 402	More than 62,000 children of limited English-speaking ability in the Northwest and Pacific areas may benefit from technical-assistance activities of the center. Assistance is designed to strengthen the capabilities of school-district staffs and parents in meeting needs in local communities. Administrators, teachers, paraprofessionals, and people from the community are being trained in language dominance-proficience testing of limited-English-speaking children, curriculum adaptation, school-community relations, and teaching techniques.
effectiveness and of educational pro- 3. territories of the rogram will provide ance to educators in Samoa, and the Trust Pacific Islands in nning, evaluation, and develop cultur- curriculum materi-	Activities in the Pacific were initiated in 1968 under a contract with the University of Guam. Subsequently assistance has been provided to the Department of Education of both Guam and the Trust Territory. Technical assistance to American Samoa began in 1973.	Territorial DOE's: Fiscal year 1972..$318 Fiscal year 1973.. 233 Fiscal year 1974.. 98 Fiscal year 1975.. 130 Fiscal year 1976.. 90 Total. 869	Technical assistance provided by the laboratory has had both short-term and long-term effects: (1) Planning, evaluation, and management of specific federally funded projects is improved and (2) local educators increase skills in these areas for application to future efforts.

Project	Objectives and strategies	Status	Funding	Accomplishmen
Educational Services Program	To assist agencies in solving problems and meeting local defined needs in education, the program will use the outcomes of educational research and development to provide services to schools, colleges, and other agencies to meet needs in management, administration, organization, and instruction.	The laboratory has provided technical assistance under contracts with State and local agencies since early in its history. In 1970 a unit called "Other Technical Assistance Projects" was organized to coordinate this work. In 1975 an educational services division was established to facilitate and expand services and assistance activities.	State/local: Fiscal year 1972..$191 Fiscal year 1973.. 240 Fiscal year 1974.. 143 Fiscal year 1975.. 173 Fiscal year 1976.. 166 Total 913	

ives and strategies	Status	Funding	Accomplishments
encies in solving meeting local defined cation, the program outcomes of education- and development to pro- s to schools, colleges, encies to meet needs in administration, organi- instruction.	The laboratory has provided technical assistance under contracts with State and local agencies since early in its history. In 1970 a unit called "Other Technical Assistance Projects" was organized to coordinate this work. In 1975 an educational services division was established to facilitate and expand services and assistance activities.	State/local: Fiscal year 1972..$191 Fiscal year 1973.. 240 Fiscal year 1974.. 143 Fiscal year 1975.. 173 Fiscal year 1976.. 166 Total 913	

RESEARCH FOR BETTER SCHOOLS, INC.



Robert G. Scanlon, Executive Director

1700 Market Street, Suite 1700
Philadelphia, Pennsylvania 19103

(215) 561-4100

RESEARCH FOR BETTER SCHOOLS, INC.

Mission

Since its beginning in 1966, Research for Better Schools, Inc. (RBS) has maintained a single goal: to improve the quality of instruction as it is actually delivered to the student. The laboratory's original prospectus asked the question, "How can educational institutions produce and offer the scope, sequence, and variety of instructional experiences which are truly suitable to the total range of abilities and requirements of students?" RBS's analysis of the range of factors which might impact most favorably, and most powerfully, on this problem led it to adopt the following assumption which undergirded its initial work: Educational programs directed toward skill learning will be improved primarily through individualization and humanization of the instructional process.

The first mission of the laboratory rested on a technology for individualizing various elementary school subject areas and on skill-building materials in the higher order cognitive and affective domains (e.g., achievement competence, interpersonal skills). The products were disseminated and demonstrated by RBS in every region of the country and, at one point, were in use by more than 450,000 students.

In the course of field testing these classroom products, it became clear that a retrained building administrator was crucial to their successful adoption and use. Consequently, the laboratory's mission was expanded to include the development of materials to improve the planning, management, and evaluation skills of school administrators, with the expectation that this would increase the effective use of the new curriculum programs.

Another extension of the tasks undertaken by the laboratory was a career-education program directed toward the high school. A model of community-based education was developed by RBS as an alternative to the school-based program which is now the only option available to most secondary school students.

As a result of their extensive engineering and testing, RBS's products generally performed up to their design specifications. Even so, the products of this and the other laboratories and centers were not adopted wholesale by schools. The face of American education was not dramatically changed by the investment of time, money, and energy which had been made on its behalf. Thus began some hard lessons for everyone regarding the complexity and difficulty of "bringing improvement to the schools."

A great deal was learned from the experience of the past decade about (1) the naivete of the assumptions then current; (2) the fragility of the then-existing knowledge base, technology, and methodology; and (3) the ignorance which prevailed of the dynamics involved in any large-scale change of a social enterprise. As a leading organization in the attempt to bring to the schools intact, comprehensive solutions to their problems, RBS was one of the first to encounter these hard lessons and has had time to learn them well.

RBS is not planning to replicate the tasks it performed during its first 10 years, but to move on to what seems to be the indicated next steps. Assuming it can continue to attract Federal moneys to support its work, the laboratory expects to continue its systematic, programmatic approach and use the knowledge and experiences it has gained to achieve objectives which are suited to the conditions likely to prevail in the next 5 years.

The 5-year mission for which the laboratory will be seeking continuing financial support, then, will include the following tasks: (1) Assist schools in achieving their goals by offering them the content expertise and experience which RBS has gained during its first 10 years, (2) systematize the experiences and results of this cooperative labor in order to advance the body of knowledge and state of the art with respect to helping schools be more effective performers, and (3) remain involved in developmental work which will have application to improved instruction for students in classrooms.

The capabilities of RBS are varied and numerous; they are presented below, according to the functions we are capable of performing and the areas in which we have substantive knowledge.

In the R. & D. area, we have outstanding qualifications in needs assessment; analysis (including cost/benefit analysis); planning; research; development (curriculum, program, and product); dissemination; demonstration; adaptation/adoption/installation assistance; evaluation (process and outcome);

and training (administrator, inservice, paraprofessional, and other). RBS does not, however, do pure (basic) research and is not experienced in nationwide surveys or highly sophisticated statistical studies.

RBS has developed expertise in a number of content areas, across which it can employ one or more of the R. & D. functions listed above in order to provide a needed service. For example, the laboratory can respond to a need in the curriculum area by offering help in (1) assessing current curriculum needs; (2) analyzing the benefit of various curriculum alternatives in relation to their costs; (3) involving the community in the decision-making on a new curriculum; (4) developing localized portions of a curriculum unit; (5) implementing a new curricular program ; (6) evaluating curriculum effects; or (7) training teachers, administrators, and paraprofessionals in the use of a new curriculum.

The laboratory has differential capability in the various substantive areas listed below. In some, RBS has a large number of knowledgeable staff, many years of experience, and an unusual degree of competence. (These areas are capitalized in the list.) The laboratory's experience in all of the areas has been at the elementary school level except for reading and mathematics (elementary, secondary, and adult) and career education (secondary).

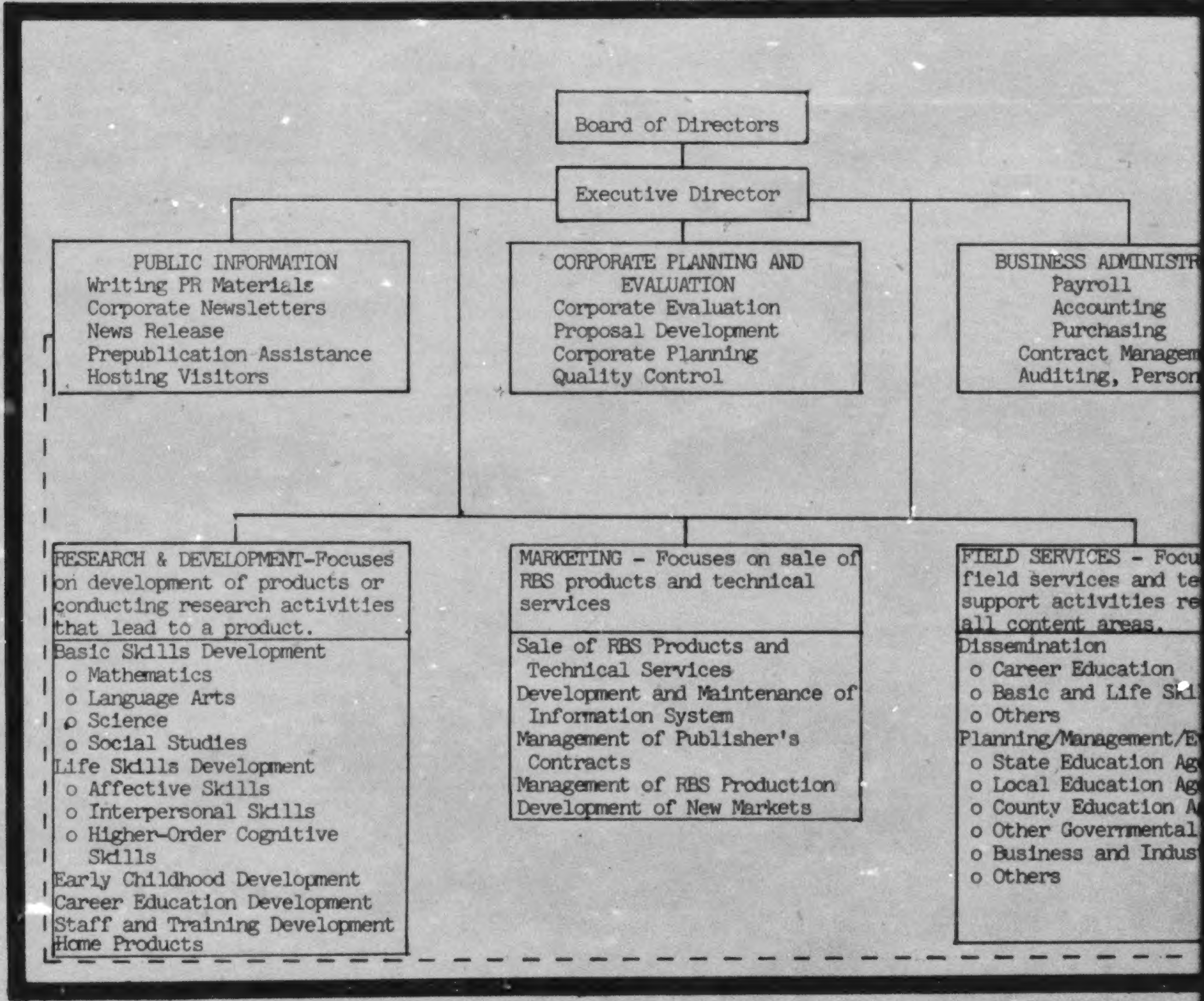
- READING
- MATHEMATICS
- SCIENCE
- SOCIAL STUDIES
- Spelling
- Writing
- Early childhood education
- CAREER EDUCATION
- ACHIEVEMENT COMPETENCE
- PROBLEM SOLVING
- INTERPERSONAL RELATIONSHIPS
- Ethics and values
- Moral education
- Self-esteem
- Motivation

In addition, the laboratory is developing capability in several problem areas that are of substantial concern to schools. These areas are: School violence and disruption, compensatory education, desegregation assistance, drug education, and educational futures.

Governance

Policy direction for the laboratory is provided by a board of directors composed of 21 members, 7 each from the States of Pennsylvania, New Jersey, and Delaware. Each State's membership consists of representatives of each of the

Figure 1. Organizational structure


Board of Directors
Executive Director
PUBLIC INFORMATION
Writing PR Materials
Corporate Newsletters
News Release
Prepublication Assistance
Hosting Visitors
CORPORATE PLANNING AND EVALUATION
Corporate Evaluation
Proposal Development
Corporate Planning
Quality Control
BUSINESS ADMINISTR
Payroll
Accounting
Purchasing
Contract Managem
Auditing, Person
RESEARCH & DEVELOPMENT-Focuses on development of products or conducting research activities that lead to a product.
Basic Skills Development
o Mathematics
o Language Arts
o Science
o Social Studies
Life Skills Development
o Affective Skills
o Interpersonal Skills
o Higher-Order Cognitive Skills
Early Childhood Development
Career Education Development
Staff and Training Development
Home Products
MARKETING - Focuses on sale of RBS products and technical services
Sale of RBS Products and Technical Services
Development and Maintenance of Information System
Management of Publisher's Contracts
Management of RBS Production
Development of New Markets
FIELD SERVICES - Focu
field services and te
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all content areas.
Dissemination
o Career Education
o Basic and Life Ski
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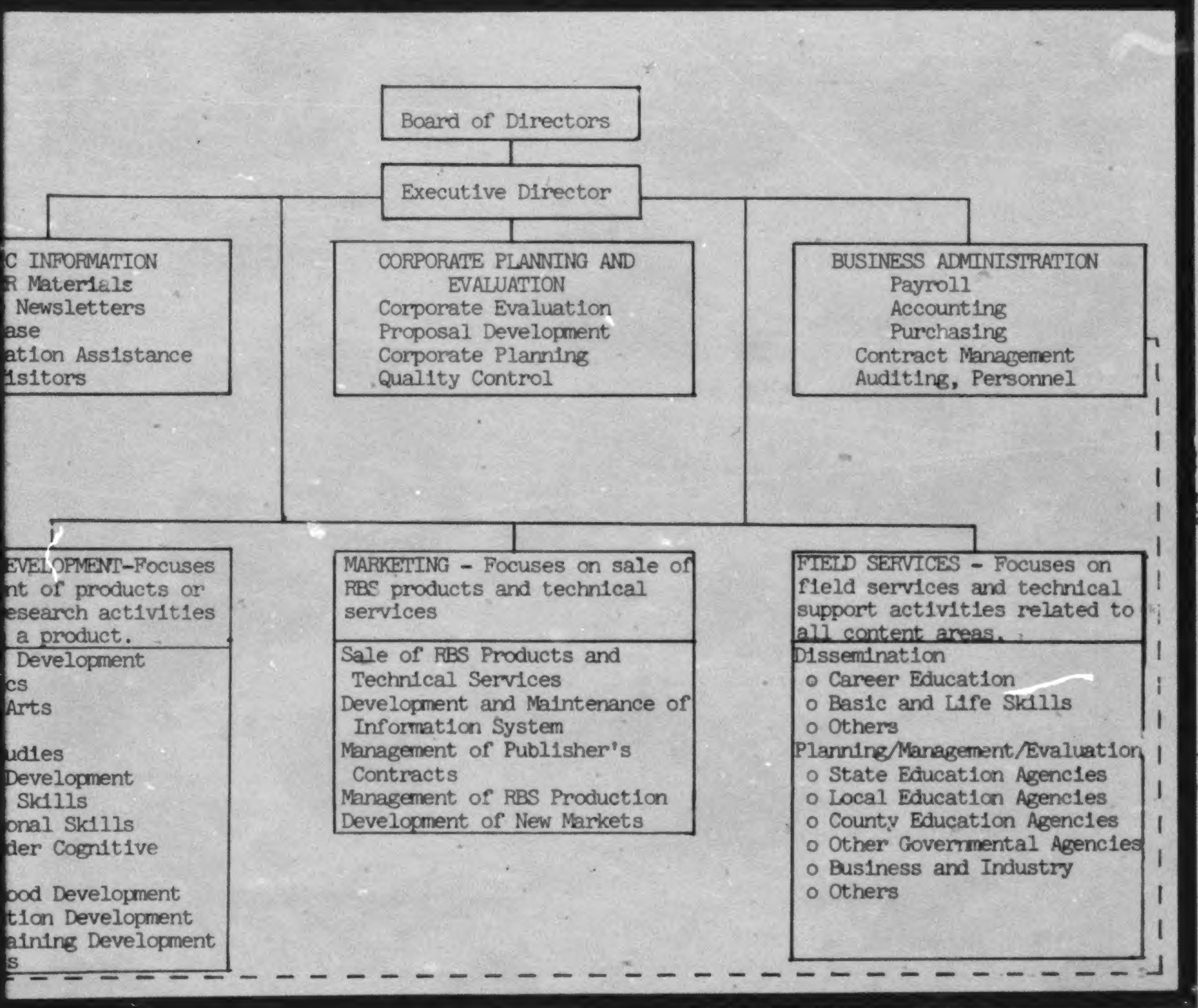
Figure 1. Organizational structure


Board of Directors
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CORPORATE PLANNING AND EVALUATION
Corporate Evaluation
Proposal Development
Corporate Planning
Quality Control
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Contract Management
Auditing, Personnel
EVELOPMENT-Focuses
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Development
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s
MARKETING - Focuses on sale of RBS products and technical services
Sale of RBS Products and Technical Services
Development and Maintenance of Information System
Management of Publisher's Contracts
Management of RBS Production
Development of New Markets
FIELD SERVICES - Focuses on field services and technical support activities related to all content areas.
Dissemination
o Career Education
o Basic and Life Skills
o Others
Planning/Management/Evaluation
o State Education Agencies
o Local Education Agencies
o County Education Agencies
o Other Governmental Agencies
o Business and Industry
o Others

following educational institutions or organizations: Urban public school systems, suburban and rural public school systems, State departments of education, parochial and private schools and school systems, and institutions of higher learning. The remaining two members from each State are chosen to represent commerce or industry and are persons who have demonstrated interest in education.

Management

Operational direction of the laboratory is the responsibility of an executive director, assisted by a team of six directors. The work of the laboratory is organized into two major units: An R. & D. division and a field-services division.

The management of the laboratory is supplemented by a corporate council, which consists of the 40 senior professionals on the staff. The council meets for 2 hours each month to review projected directions for the laboratory, personnel policies, affirmative-action policies, and so forth.

Evaluation of laboratory operations is conducted in two locations. Each developmental activity has its own staff of evaluators to provide immediate feedback on processes and formative materials. They function as an integral part of the development staff in that their reports are used for product revision and improvement.

The laboratory also maintains a separate evaluation operation. The primary function here is one of overseeing the technical performance of the developmental evaluators and thereby assuring the quality of the products being produced. Recently, the corporate evaluation office has also begun to offer evaluation services outside the laboratory, as part of our technical-assistance services to schools, SEA's, and others.

As external reviewers, the laboratory maintains both an institutional review board (formerly the human-subject committee) and a committee on equity and social fairness.

Staff

RBS has a full-time staff of 78 professionals and approximately 40 support personnel, plus access to the professional services of a large number of part-time staff associates, consultants, and advisers. A breakdown of the disciplinary areas of the degrees held by the full-time professional

Table 1. Staff discipline profile

Substantive field or discipline	Bachelor's degree	Master's degree	Doctoral degree
Education (including elementary and secondary)	1	5	1
Educational administration	-	3	7
Educational foundations	1	1	1
English/reading	4	7	1
Curriculum and instruction	-	-	2
Curriculum development	-	2	2
Evaluation and measurement	-	1	3
Educational psychology	-	1	5
Psychology	2	1	1
Social/experimental psychology	-	-	1
Social science	2	-	-
Behavioral sciences	-	-	1
Anthropology	-	1	-
Early childhood education	1	-	-
Speech/languages/communication	1	3	1
Economics	1	-	-
Mathematics/statistics	-	1	1
Mathematics education	-	-	1
Biology/zoology	1	1	-
Library science	-	1	1
Business/accounting	3	-	-
Marketing	-	1	-
Liberal arts	2	-	-
Sociology	-	-	1
Total	19	30	29

staff, and the highest degree held, is presented in table 1.

Training Provided to Others

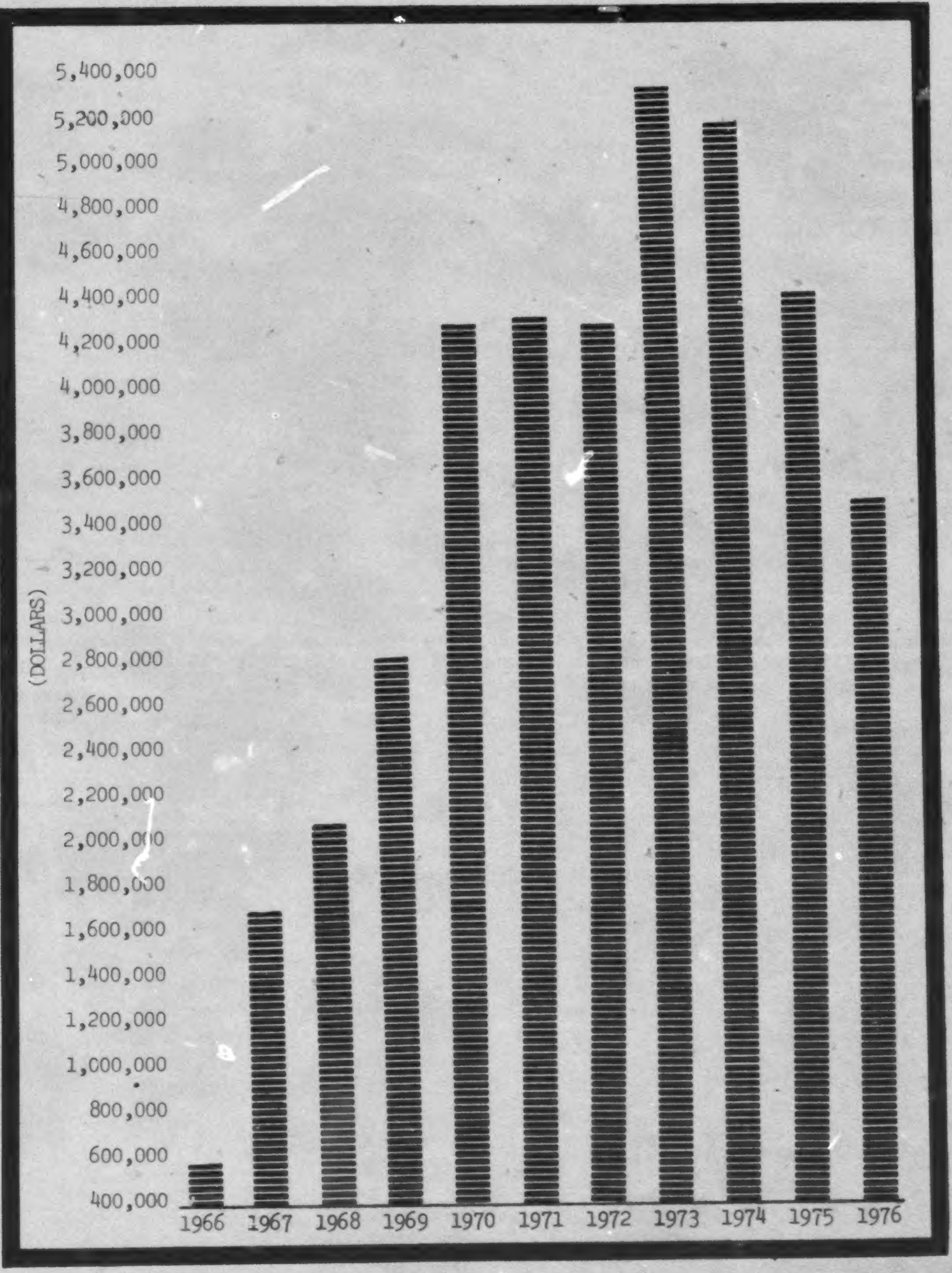
The training provided to others by the laboratory is directed to schools and school personnel in the tristate region, as part of the technical-assistance services of the laboratory. These services include the following:

- A continuing contract with the Pennsylvania State Department of Education to provide the content for a series of executive academies. Teams of administrators are drawn together from several school districts for a several-day workshop on a topic of common interest.
- Evaluation training offered to intermediate unit personnel in Pennsylvania so they, in turn, can provide support to the school personnel in their areas.
- Evaluation training provided to every Federal project director in Delaware to help them meet the Federal requirements for evaluation.
- Other, nonsequential workshops offered by the laboratory. During the past year these included the following: (1) Westmoreland and Allegheny (Pa.) Intermediate Units—workshop on long-range planning; (2) Delaware and Chester County Intermediate Units—curriculum and evaluation; (3) Delaware County Intermediate Unit—conflict resolution; (4) Northwest EIC (an intermediate unit in New Jersey)—workshops on critical thinking, the role of the change agent, and training for achievement competence; (5) Edgewater/Raritan School District (N.J.)—management by objectives; (6) Newark (Del.) School District—project management; and (7) Lancaster-Lebanon Intermediate Unit—workshops on project management and curriculum evaluation.

Institutional Relationships

The laboratory works with numerous persons in institutions of higher education (e.g. Temple University, University of Pennsylvania, Pennsylvania State University, University of Pittsburgh) business and industry groups (e.g., the Philadelphia Chamber of Commerce, IBM), and professional organizations, but has not formalized an institutional arrangement with any of them except the Learning Research and Development Center (LRDC) and the Imperial International Learning Corporation for the field testing of Individual

Figure 2. Funding history



The major institutional relationships of the laboratory are with State education agencies, intermediate units, school districts, and schools. RBS's work with these organizations has been massive, extensive, and of long-standing duration. In the early years of the laboratory's life, RBS maintained a national network in which continuing technical support was provided approximately 400 schools throughout the Nation. From 1969 to 1973, RBS maintained a national network of 50-60 demonstration schools which were a key element in a strategy for disseminating curriculum products to schools in every State. RBS created and maintained a network of 25 State education agencies which had its focus on the processes of change and innovation, and the requirements for each. RBS now maintains a network of nearly 100 schools, school districts, and other agencies (intermediate units, for the most part) which have a common focus on futuring and alternative futures for education. Another current network consists of more than 50 schools nationally which serve as demonstration schools and data-collection centers for the field testing of Individualized Science.

The most extensive current network is the one the laboratory maintains in the tristate region of Pennsylvania, New Jersey, and Delaware. The objectives of the participants in this network are (1) to assist schools with the use of R. & D. resources for improving the quality of instruction, and (2) to contribute to knowledge about the processes schools use to improve their instructional programs.

Facilities

The laboratory leases approximately 41,250 square feet on two floors of the IVB Building at 1700 Market Street, Philadelphia, Pa. Of this total, the production department occupies approximately 2,900 square feet. The remainder of the space is general office and conference space.

The production facilities are elaborate and include graphics, duplicating, and audiovisual capabilities.

CURRENT NIE PROJECTS

Project ADMINISTERING FOR CHANGE

The Administering for Change program has three interrelated goals: (1) To develop resource materials which strengthen the capabilities of schools to improve their educational programs, (2) to assist schools in the use of R. & D. resources to improve the quality of instruction, and (3) to contribute to knowledge about the processes which schools might use to improve their educational programs. NIE's current contract for this program is organized into three projects. Descriptions of these projects follow.

Project REGIONAL NETWORK

Objectives and strategies. Another objective of the Administering for Change program is to assist schools in the use of R. & D. resources to improve the quality of instruction in the schools. To this end, the Regional Network project is concentrating its efforts on the educational systems of Pennsylvania, New Jersey, and Delaware. The project is following a consumer-oriented strategy which involves (1) developing an understanding of the goals, initiatives, and needs of each level of the State educational system; (2) selecting R. & D. resources most relevant to those needs; and (3) providing technical assistance to help agencies plan, implement, and evaluate their use of selected R. & D. resources.

Status. RBS has gathered basic information about each of the three State systems. In Pennsylvania it has worked with the State-sponsored executive academy, the division of educational quality assessment, and selected intermediate units and their affiliated school districts. In New Jersey RBS has worked closely with the educational improvement centers and is trying to assist in the planning and implementation of "Thorough and Efficient" legislation. In Delaware RBS has worked with the State department and selected school districts and is exploring ways it can support districts involved in the court-mandated desegregation of the Wilmongton schools. In the course of its work, RBS is building a system for documenting both its work in each of the States and the extent to which it succeeds in helping schools of those States use R. & D. resources.

Project STRATEGIES FOR SCHOOL IMPROVEMENT

Objectives and strategies. One objective of the Administering for Change program is to develop a series of products to help school staffs, involved in curricular and instructional improvement, to use a selected set of planning, management, and evaluation strategies and techniques. The products are essentially handbooks which provide a description of a planning, management, or evaluation procedure; worksheets to help a group apply the procedure; examples of how other school staffs have used the procedures; and specific instructions to group leaders on how to manage the work effort. The products are designed so that the group can apply them to a specific problem they are facing.

The relevancy and usability of the products are assured by the involvement of selected local school districts in their development and field testing.

Status. Three training products on the topic of project management have been completed. One of these, Project Management: Basic Principles, has been approved for dissemination by the joint dissemination review panel. A Handbook of Comprehensive Planning has been completed and is now published by Educational Technology, Inc. Prototypes of five other handbooks, related to such tasks as planning improvement, selecting curricular programs, identifying pupil needs, surveying community perceptions, and evaluating curricular programs were delivered to NIE in the spring 1976, along with product development reports. Funding for fiscal years 1976 and 1977 will support implementation and effectiveness evaluation of these products. In addition to the above products, a general text, The Human Dimensions of School Improvement, and a self-administered instrument, Inventory for Curricular and Instructional Improvement, have been prepared for school staffs involved in program improvement efforts.

Project COOPERATIVE DISSEMINATION AND LINKING AGENT TRAINING

Objectives and strategies. This is one part of a project representing the cooperative efforts of nine laboratories and centers. The goals of the project are (1) to provide effective dissemination of materials and knowledge developed by the L/C's in the areas of educational planning, management, and change support; and (2) to make available coordinated materials and training resources to linking agents. The strategies to be used involve (1) collecting, describing, and integrating the set of resources in a form which permits selection of useful materials; (2) orienting, training, and building a support system around the set of resources; and (3) preparing, responding to, and revising technical/conceptual papers to inform the work in (1) and (2) above.

Status. This project began in fiscal year 1976 and is expected to continue in fiscal years 1977 and 1978. RBS is providing a resource specialist to the project. To date, the project has prepared a catalog describing the materials available from the laboratories and centers. It has conducted orientation sessions at four regional meetings sponsored by AASA and two sessions for the State R. & D. utilization projects. Currently, RBS is designing a workshop using a variety of lab/center materials for the Delaware State Department.

Funding.

Fiscal year 1976 . . . . . $670,000

Monitoring history.

Regional Network and Strategies for School Improvement:

Dates	Project officer	Activity
December 1973	William Cody	General monitoring.
July 1973	Lila Carol	September 1973, 2-day evaluation review, with 5 NIE staff and 2 outside consultants. January 1974, 2-day site visit with 2 NIE staff. May 1974, 2-day site visit with project officer.
August 1974 to present	Robert Pruitt	October 1974, 3-day site visit with project officer. May 1975, 2-day site visit with project officer.

Dates	Project officer	Activity
August 1974 to present	Robert Pruitt	July 1975, 2-day site visit with project officer. February 1976, 3-day site visit with project officer. April 1976, 2-day review of progress at NIE with project officer and other NIE staff. July 1976, 3-day site visit with project officer.

Cooperative Dissemination and Linking Agent Training:

December 1975	Spencer Ward	Formal meeting of L/C representatives, NIE monitor, and NIE staff person.
March 1976		Overview and planning meeting at FWL.

Project HUMANIZING LEARNING PROGRAMS

Objectives and strategies. The humanizing learning program was designed to build a four-part skill-oriented curriculum which focused primarily on developing and integrating social, intellectual, and emotional skills of the learner. The curriculum consists of (1) the content continuum, (2) the learning environment, (3) the data-sharing technology, and (4) curriculum materials. The target population is the elementary schoolchild, of varying learning capacities.

This program has had eight components:

(1) "Language of Personal Experience." The purpose of this project was to give children aged 10-12 a vocabulary which helps them to describe in a consistent way their personal reality. Its intent was to help students learn to analyze those elements of personal experience which lead them to behave in certain ways in specific situations.

(2) "Skills for Ethical Action." The purpose of this project is to provide teachers with the tools to educate 13-14 year-olds to use a behavioral strategy which leads to actions consistent with their regard of self, others, and objectivity.

(3) "Testing Interpersonal Hypotheses." This program is designed to enable fourth-grade students to conduct their interpersonal relationships in a more open, aware, and effective manner.

(4) "Making Changes." The purpose of this program is to teach middle-school-age children how to approach and seek a solution to open-ended problems. It utilizes a model which focused on a set of strategies for problem definition, the analysis of values and solution constraints, the generation of solution ideas, and the evaluation of these ideas.

(5) "R. & D. Agenda Building in Moral Education." The purpose of this project is to work at delineating a research and development agenda for moral/ethical education through (1) the development of a knowledge base, and (2) the convening of a conference devoted to explication of major issues.

(6) "Achievement Competence Training." The purpose of the program was to assist teachers in teaching children the skills for setting and achieving their own goals. This program is being published by McGraw-Hill.

(7) "Making Judgments." The purpose of the program was to assist teachers to teach children skills for critical thinking.

(8) "Knowledge Base." The purpose of this program was to produce knowledge documents useful to the professional public; an example is the recent three-volume edition of Measures of Maturation which catalogs and evaluates all existent behavioral observational instrument designs for observing young children.

Funding.

Fiscal year 1973	$925,784
Fiscal year 1974	1,084,204
Fiscal year 1975	771,202
Fiscal year 1976	648,292
Total	3,429,482

Monitoring history.

Dates	Project officer	Activities
August 1972- September 1974	Martin Engel	October 1972, Panel D review, JoAnna Williams and Richard Hodges. May 1973, site visit by Engel with Wilmer Cody to amend RAMP. May 1974, site visit by Engel with Ellen Greenberger.
September 1974- January 1975	Spencer Ward	September 1974, site visit by Spencer Ward. October 1974, site visit by Gary McDaniels and Spencer Ward.
January 1975- September 1975	Richard Harbeck	
September 1975 to present	Samuel Pisaro	Site visit by panel for program evaluation; Kevin Ryan, Allan Samuel Pisaro.

Project INDIVIDUALIZING SCIENCE PROGRAM

Objectives and strategies. This project is one work unit of the Individualizing Learning program and is a cooperative endeavor with the Learning Research and Development Center (LRDC) at the University of Pittsburgh and the Imperial International Learning Corporation. Individualized Science is an elementary school multimedia instructional program which provides for student self-direction and coevaluation designed to develop inquiry skills and scientific literacy. The RBS development role is to carry out both formative and summative evaluations of the materials and to develop a teacher-preparation component. As these are completed, needed final revisions are made and the materials are then produced for sale to schools. Final completion of this component is scheduled for mid-1977.

Funding.

Fiscal year 1972	$139,200
Fiscal year 1973	145,626
Fiscal year 1974	147,144
Fiscal year 1975	127,862
Fiscal year 1976	68,659
Total	628,491

Monitoring history.

Dates	Project officer	Activities
December 1972 to present	Richard Harbeck .	September 1972, Panel D review, JoAnna Williams and Richard Hodges. May 23, review of Individualized Learning program RAMP by JoAnna Williams. April 1974, site visit with Tom Glennan, Garry McDaniels, Richard Harbeck. April 1975, site visit by Richard Harbeck.

Dates	Project officer	Activities
October 1975 to present	Samuel Pisaro	Site review for program evaluation, David Butts, Bill Bowles, Jennie Gross, Samuel Pisaro.

Project INDIVIDUALIZED MIDDLE MATH

Objectives and strategies. Individualized Middle Mathematics (IMM) is an individualized instructional program encompassing content usually associated with seventh- and eighth-grade mathematics. The basic development unit of IMM is called a level. Four levels (K-N) are planned for the present program. Each level is organized into six or seven topic areas and includes the following: (1) Criterion-referenced placement tests, (2) criterion-referenced pretests, (3) diagnostic-prescriptive instruments correlated with instructional materials, (4) self-instructional booklets, (5) criterion-referenced tests, and (6) criterion-referenced posttests. In addition to the self-instructional booklets, a series of special activities are planned for each level. At each level, there will be from 15 to 30 optional instructional activities correlated with the various instructional booklets. Those activities will be designed for either individual and/or small-group use.

Funding.

Fiscal years 1972-75 . . . . . $830,315

RBS has requested $326,562 for fiscal year 1976 and $348,862 for fiscal year 1977.

Monitoring history.

Dates	Project officer	Activities
1972-75	Richard Harbeck	Periodic phone calls and correspondence.

Dates	Project officer	Activities
1975 to present	Kent Sullivan	Periodic phone calls and correspondence. October 1975, site review with Gail Young, Shirley Frye, Jack Churchill. January 1976, site review with Dean Bundes, Marie Herman.

Project SOCIAL ENCOUNTER AND RESEARCH CURRICULUM FOR HUMANIZATION

Objectives and strategies. This project is one work unit of the Individualizing Learning program. Its objective is to design and test an individualized program for elementary schoolchildren which draws from the several disciplines of the social sciences and interrelates these concepts with the cognitive-developmental psychology of Jean Piaget. SEARCH seeks to develop a child's imagery and language as the basis for understanding social studies. Where reading abilities are limited or lacking, multimedia instruction will be provided while children are concurrently working on their reading skills. Originally conceived as a K-6 program, program plans have been revised and curtailed to cover grades K-3 at the present time.

Funding.

Fiscal year 1972	$228,400
Fiscal year 1973	265,665
Fiscal year 1974	269,618
Fiscal year 1975	227,066
Fiscal year 1976	257,516
Total	1,248,265

Monitoring history.

Dates	Project officer	Activities
December 1972-75	Richard Harbeck	September 1972, Panel D review with Richard Hodges, JoAnna Williams.

Dates	Project officer	Activity
December 1972-75 (continued)		May 1973, RAMP review by JoAnna Williams. December 1973, review of revised RAMP. January 1974, site visit with Robert Chesley. September 1974, site visit, Gary McDaniels and Spencer Ward. May 1975, site visit.
December 1975 to present	Samuel Pisaro	Site review Herbert Walberg, Verne Hullett, Jennie Cross, and Samuel Pisaro.

Project SYSTEMATIC PROGRESS IN READING AND LITERATURE

Objectives and strategies. Systematic Progress in Reading and Literature (SPIRAL) is an individualized reading program for developing reading skills and motivating students to enjoy reading. The objectives of the program are to (1) teach basic comprehension skills in the context of concept development; (2) teach future interest in reading for purposes of enjoyment, as well as knowledge acquisition and utilization; (3) teach self-management skills through decisionmaking and problem solving; and (4) enhance self-esteem through increased self-understanding.

The program is composed primarily of literature anthologies and skill modules for teaching reading comprehension. The anthologies are organized into four themes: Animal encounters, communication, conflict, and searching. These anthologies provide students with a body of high-quality reading material to motivate them to read and also provides the content and context for teaching reading skills.

Status. The developmental stages of SPIRAL are near completion and the program will be ready for publication by December 1977.

Funding.

Fiscal year 1975	$359,62[illegible]
Fiscal year 1976	407,000
Fiscal year 1977	407,000
Total	1,173,621

Accomplishments. Program still being developed.

Monitoring history.

Dates	Project officer	Activities
1972-75	Richard Harbeck	September 1972, panel D review by JoAnna Williams and Richard Hodges. January 1974, site visit with Bob Chesley.
September 1974	Bob Chesley	Site visit by Garry McDaniels and Spencer Ward.
July 1975 to present	Noel Brennan	August 1975, site review with Ron Leslie, Roger Shery, Dorothea Seamons, Joyce Levin.

COMPLETED OR TERMINATED NIE PROJECTS

Project DESIGN FOR A STUDY OF THE EFFECTIVENESS OF INDIVIDUALIZED INSTRUCTION IN READING AND MATHEMATICS

Objectives and strategies. As part of NIE's compensatory education study RBS was awarded a contract to develop a design for the evaluation of individualized instruction in reading and mathematics.

Status. The design was completed in October 1975.

Funding. An award of $63,687 was made through an open competition.

Table 2. Current non-NIE projects

Program	Objectives and strategies	Status	Funding	Accomplishmen
RBS Drug Information Activity Booklet for Children Project	This 10-month project has the objective of furnishing information to 10-14 year-olds on the abuse of drugs together with materials to stimulate the development of life skills to help prevent drug abuse. The objective is to prepare a booklet in a language these children can understand and relate to in a "home use" setting.	Project completion is scheduled for early October 1976.	$27,967* *This project is funded by the National Institute on Drug Abuse.	Booklet still being de
Child Development Associate Training Program	The child development associate (CDA) training program is designed to train individuals to work effectively in preschool centers, with children between the ages of 3 and 6, by providing the trainees with the necessary knowledge, skills, and behaviors. It is an alternative approach to the traditional college training program.	The development and testing of all program modules is scheduled to be completed by June 30, 1976.	$244,925* *This project is funded by the Office of Child Development.	Program modules neari
Data Bank/ Clearinghouse for Career Education	The data bank/clearinghouse is designed to serve the coordination needs of schools and business, industry, government, union, and service agencies as they collaborate in rapidly developing career education efforts. In response to this growing need, the Greater Philadelphia Chamber of Commerce, the School District of Philadel-		$12,000* *This project received initial funding from the William Penn Foundation.	Design for the cleari completed June 30, 19

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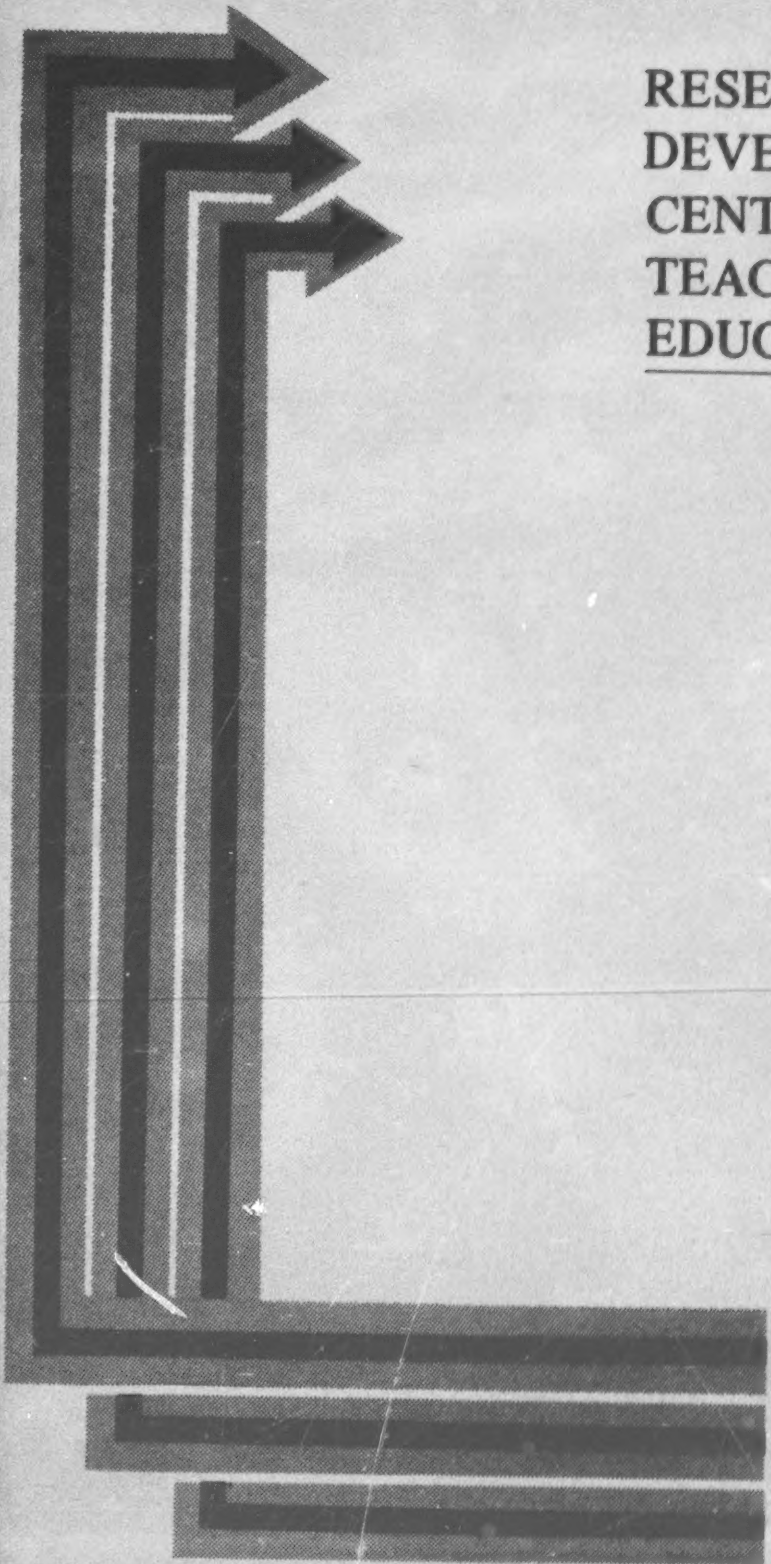
/clearinghouse is serve the coordination ols and business, in- rnment, union, and cies as they collabo- dly developing career forts. In response to need, the Greater Chamber of Commerce, istrict of Philadel-		$12,000* *This project received initial funding from the William Penn Foundation.	Design for the clearinghouse completed June 30, 1976.

Program	Objectives and strategies	Status	Funding	Accomplishm
	phia, and Research for Better Schools have developed the concept of a data bank/clearinghouse which would coordinate all aspects of the school-business relationship, facilitate maximum utilization of resources, and help assure that the vital relationship between schools and the community is maintained.			

ctives and strategies	Status	Funding	Accomplishments
Research for Better ave developed the concept bank/clearinghouse which rdinate all aspects of the siness relationship, e maximum utilization of , and help assure that the tionship between schools mmunity is maintained.			



RESEARCH AND DEVELOPMENT CENTER FOR TEACHER EDUCATION

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RESEARCH AND DEVELOPMENT CENTER FOR TEACHER EDUCATION

Mission

The Research and Development Center for Teacher Education was established at the University of Texas at Austin in 1965. It was built on a foundation of approximately 8 years of research, development, and demonstration projects supported by the Hogg Foundation for Mental Health, the National Institute of Mental Health, and the U.S. Office of Education. This support and that provided by the university made possible the recruitment and maintenance of an interdisciplinary team of researchers, developers, practitioners, and consumers.

This team has worked on a long-range program of research, development, and dissemination activities built around several sequentially linked propositions:

- In order to design education that promotes student learning without causing undesirable side effects, it is necessary to evaluate several major outcomes simultaneously.
- The emotional adjustment of students often has a powerful effect on their learning.
- Students affect teacher behavior, just as teachers affect student behavior.
- There are important differences in the dynamics of the learning process among students of different cultures. No single style of teaching works equally well with all of them.
- A crucial, worldwide challenge is to invent educational strategies that will maximize the learning of working-class children.
- Studying each of these problems, and designing more effective schooling, requires a logical model that examines the interacting effects of teaching strategies and student characteristics on multiple outcomes of instruction.
- The most effective learning system is one which identifies and addresses each student's particular intellectual and emotional needs.
- The process of adopting innovations into educational practice has a discoverable logic of its own. Research can identify the dynamics of this process. Thereafter, any improved procedures must be disseminated in ways that follow the natural logic of the adoption process.

- All of the propositions above are intended to apply to the design, conduct, and evaluation of teacher education, both preservice and inservice, as well as to educational programs for children. Resulting programs provide a high degree of individualization and personalization and direct experience for teachers which constructively supports the assumption that they will teach in the way they have been taught.

The center has brought together or invented instructional techniques designed to promote these kinds of learning and it has tested their actual effectiveness. Where components proved successful, training systems have been developed and field tested to help teachers and teacher-educators learn to use these techniques and to adapt them to their own practical requirements.

In response to emerging priorities within the National Institute of Education, the center is currently organized around four major projects with funding contracted through September 1976. Each project is presently focused on the basic research and evaluation aspects of the R. D. & D. process, but each is looking toward the development and dissemination processes. All four projects deal with real-world educational problems, with a strong emphasis on improving children's basic skills and their teachers' ability to foster these skills effectively.

The center has developed expertise and conducted research in the following areas. Each staff member has a strong interest in pursuing one or more of these issues, seeing them as places with high payoff potential for R. & D. investment.

- Refining methods for assessing the validity and generalizability of measures of teaching behavior.
- Improving models and methods for evaluating educational effects.
- Identifying precise links in the chains of causality in the teaching-learning process.
- Identifying factors that presently make for large discrepancies in learning in different socio-economic and ethnic groups; and identifying teaching procedures that lead to more effective learning for all children.
- Identifying the detailed dynamics of the process of career choice and career growth from late childhood

into adulthood, with particular attention to the interacting effects of personal values and coping skills, as they develop.

- Identifying teaching procedures that foster children's development of effective coping skills, work attitudes, and work habits.
- Developing and testing ways to personalize and make more efficient and effective the process of implementing innovations in schools and colleges.
- Combining many of the findings and methods from current and next-step research into an experimental, school-based program aimed at substantially improving the learning of basic skills, especially by economically or culturally disadvantaged children--the greatest unsolved educational problem of this and every other nation.

Governance

The center was originally established under OE with joint "sponsorship" by the university, the Texas Education Agency, and the Austin Independent School District. The university provided substantial fiscal support to the center in the form of reduced overhead, contributed faculty time paid for out of the "hard money" teaching budgets, completely rebuilt physical housing facilities, contributed central computer services, etc. The dean and chairmen of all departments in the college of education, the Texas commissioner of education, and the superintendent of the Austin Independent School District served as a local policy and planning board. This board met regularly on a monthly basis to review yearly proposals for scope of work, to recommend and assist in coordinating tactical plans for the conduct of R. & D. activities, and to monitor progress. At least twice per year, national members of the center-appointed policy and planning board met with local members to lend national perspective to planning and monitoring efforts. National members were informed of center progress throughout the year through the minutes of all meetings of the board, copies of all center planning documents and reports, and correspondence.

Members of the local board, or occasionally their appropriate delegates, served additionally on standing or ad hoc administrative groups to serve in active coordinating roles when the center's program was functionally interrelated with ongoing programs in the college, the public schools, or the Texas Education Agency. For many years, the center provided the full or partial salary for a senior member of the superintendent's staff who served as coordinator for all arrangements involved in joint center-public school programs.

The university, as the contracting agency with the Government, has played a unique role in the nonsubstantive aspects of center governance. Through its office of sponsored projects all contractual and fiscal proposals and negotiations are examined and recommended for approval by the vice president for business affairs, the president, and the university systems officials. The center operates in accordance with all policies and regulations of the university in such matters as personnel recruitment and hiring, salary schedules, travel, purchasing, etc. The center maintains its own bookkeeping staff responsible for all fiscal reports to the university auditor and the Government.

The following changes have occurred since the center moved under NIE auspices:

- Planning and monitoring occurred mainly between individual project directors and the NIE program officer, rather than the center as an institution. The policy and planning board and the interagency administrative groups ceased to function.
- The university perceived these changes as a conversion from a national center with "favored status" within the university to a collection of research projects. Simultaneously, it regarded the long-term "moral" commitment of the Federal Government to the center as effectively replaced by a short-term contract which might not be renewed.
- Apart from university fiscal support, the nonsubstantive aspects of the university's governance role over the center remains unchanged. The center continues to report through the dean of the college of education to university administration.
- The net effect of all the above changes has been to make the center essentially independent of its original sponsoring agencies insofar as its substantive program is concerned. NIE in Washington plays a much stronger role in guiding and monitoring the scope of work of center projects. In the field, new relationships with schools and colleges across the country have been formed to permit the data collection required in each of the projects.

- Through our concern to see educational R. & D. have more direct impact on school practices, we anticipate the possibility of initiating a new effort next year, aimed at achieving this end. A planning effort is currently under way which involves all department heads in Austin Independent School District and all current projects in the center. If this kind of program is supported, it will take full advantage of our past success in collaborative governance, both within the management team in the center and through reinvolving our collaborating partners in the college and Austin schools.

Management

Program and fiscal decisions are negotiated directly between project directors and NIE program officers. Each of the center's projects holds the responsibility for its own planning and evaluation activities, as well as for project design and management. Each project currently employs its own consultants, selected for their nationally recognized expertise on issues specific to that project.

In order to keep the projects in communication with each other, the codirectors of the center periodically convene the project directors.

The steady stream of inquiries and visitors who want to study the center's total array of work has continued unabated. The codirectors manage this flow of correspondence and visits from educators all over the world. The codirectors oversee or carry out all negotiations with the university yearround. Finally, the codirectors continue to initiate long-range planning and to involve representatives of local, State, and national education agencies in such planning, where a coordinated approach to certain national educational problems seems clearly needed.

Staff

The center's staff consists of 7 professionals, 9 support professionals, 6 graduate research associates in the doctoral program, 21 graduate research assistants with degrees, and 18 secretarial and clerical staff. The departmental affiliations of the staff include educational psychology, curriculum and instruction, psychology, education, and computer science.

Staff Development

The center has the great advantage of being able to draw on the large pool of talent represented in the graduate students in the university in staffing its projects. Numerous, two-way linkages exist between their work on center projects and their training in graduate courses. A good many of them have worked with center and project directors in a dual capacity. The individual studies under the director-as-professor and also receives day-to-day supervision in carrying out project operations. The center does, of course, also employ a good many graduate students whose primary training rests with faculty members who are not on the center staff. Even in this case, there are many tie-ins between skills required for graduate training and the skills required for successful project operations. The center provides special training opportunities of several kinds:

- The intensive on-the-job training with day-to-day supervision for all staff members below the project director level.
- Special workshops arranged by the center for its staff on such topics as instructional design, interaction analysis, staff development, and management and time-accounting systems. The evaluation-of-teaching project has invited several educational researchers to UT to give presentations to interested faculty and graduate students.
- Participation in training sessions provided by Council for Educational Development and Research, Inc. (CEDaR) divisions for staff in business management, communications, and evaluation.
- As a regular part of the center's activities, everyone from the center directors and project directors down to junior staff members participate in conferences with specially invited consultants who provide a vitally important training function.
- Staff members participate with directors in continuing discussions with researchers elsewhere in the United States. Periodic conferences, such as the NIE-sponsored conferences in Washington in June 1974 (National Conference on Studies in Teaching), in San Diego in August 1975 (Conference on Research on Teaching), and in Austin in November 1975 (Research on Teacher Effects: An Examination by Policymakers and Researchers), are typically followed by a considerable flow of two-way correspondence on ideas and techniques which may be useful at several places in the national research network.

Every division within the center depends heavily on its complement of research assistants and associates, who serve in an apprenticeship capacity at levels ranging from advanced undergraduate status, through doctoral programs, to postdoctoral professional positions. These staff members receive graduated responsibility and supervision, commensurate with their increasing skill and experience. They take active part in planning meetings, and in the interchanges which bring research and development products along to satisfactory completion. In addition to their interchanges with project consultants, they attend all relevant sessions with external site review teams and with NIE monitors. Indeed, as they gain expertise, they frequently begin to act as consultants to other educational researchers and institutions.

Training Provided to Others

By virtue of their reputation within the university community, all senior staff members of the center, as well as a number of its advanced level research associates, are called upon frequently by university faculty and graduate students who are not associated with the center for consultative assistance on research and evaluation design, multivariate analysis, instrument design, computer programing and processing, and literatures access and conceptual paradigms across a broad range of research problems in teaching, learning, teacher education, and other aspects of education. Center knowledge products are provided to such inquirers, but individualized consultation is often requested, as well.

Similar requests are received in substantial number each month from educational researchers, developers, and practitioners, across the country and internationally, through correspondence, telephone calls, and personal visits to the center. Many such requests are handled through center publications; but, again, further, direct "training" is often requested through correspondence or personal visits.

Institutional Relationships

Each current project within the center emerged from a relatively long history of programmatic R. & D. in its now more sharply delineated area. All of that work focused directly on pressing needs and complicated problems in the "real world" settings of college and school. Thus, there is very little of our work, past or present, which has not involved us in close, and usually long-term, collaborative relationships with teacher-education programs in colleges and universities, with State education agencies, with school systems, and with individual schools.

These relationships have included interinstitutional networks of colleges and universities to share ideas on teacher-education program development, continuing cooperation with the Austin School District in efforts to find more effective ways of teaching and assessing effects that teachers have upon children, as well as collaboration with different institutions on specific research projects. Work with the office of research and evaluation of the Austin School District has been particularly effective, with teachers in the district participating in center research studies, results being made available to the district and joint planning done for future projects.

On another front, exploration and serious discussion have also been under way with researchers at the Far West Laboratory. The most recent products of this beginning collaboration have been the post hoc analysis of some of their data to determining "levels of use" and the joint development of a proposal to the National Science Foundation.

Institutions from 10 other countries have sent representatives to the center in the past 3 years. In addition, 200 foreign institutions have requested and been sent information and product from the center.

Members of the center staff have frequently served as consultants to foreign educational agencies. Robert Peck, for example, has served as consultant to UNESCO's Asian Center for Education in Baguio, the Philippines, and in Bangkok, Thailand; to the Instituto Naçional de Capacitaçion de Magisterio, in Mexico City; to Brock University, Ontario, Canada; to the University of São Paulo, Brazil; to the Human Development School, University of Bonn, West Germany; etc. Currently, he is in correspondence with the dean of education of a Saudi Arabian university, to explore a possible collaborative arrangement between the center and the Arabian educational system.

Facilities

The center is housed in the three-story south wing of the education annex. This area was totally renovated by the University of Texas in 1970 according to the center's specifications.

Table 1. Funding history

Fiscal	Number of	Dates	OE funds	NIE funds	***UT funds	Royalties
1966	10	9/1/65-6/30/66	$459,175		$160,520	
1967	12	7/1/66-6/30/67	770,400		213,027	
1968	12	7/1/67-6/30/68	866,505		203,886	
1969	7	7/1/68-1/31/69	388,000		123,361	
1969	12	2/1/69-1/31/70	820,000		*128,534	
1970	12	2/1/70-1/31/71	656,000		104,387	
1971	10	2/1/71-11/30/71	670,833		136,493	
1972	12	12/1/71-11/30/72	805,000		202,958	$546
1973	12	12/1/72-11/30/73	197,000		31,903	
1973	12	12/1/72-11/30/73		$528,000	55,322	$255
1974	2	12/1/73-1/31/74		97,830	11,368	
1974	1.5	2/1/74-3/15/74		92,307	7,177	
1974	10.5	3/16/74-1/31/75		684,459	101,780	104
1975	12	2/1/75-1/31/76		850,015	52,413	
1976	8	2/1/76-9/30/76		**704,545	42,142	
		****1973-76 Totals		2,957,156	270,202	

*In addition to this sum, the University of Texas spent about $500,000 for remodeling and furnishing office facilities in 1969.

**$20,000 NIE conference not included.

***UT contribution about 9.15 percent.

****Money received from dissemination of our products is deposited to a revolving fund. This is reimbursement for expenditures only and is not income as such.

The center rents a remote job-entry terminal consisting of the following components: (1) PDP 11/20 RJE terminal, (2) DC 11AA college system, (3) DC 11DA model set, (4) BM 792 Y.A. bootstrap loader, (5) CR 11 card reader, and (6) LP 11JA line printer. This equipment provides full access to the university's central computers, a Control Data Corp. (CDC) 6600 and a CDC 6400. Extensive consultant services for computer utilization are available at the computation center.

The center also rents the following IBM card-punch equipment: (1) 029 card punch with interpreter, (2) 083 card sorter, (3) 129 card punch, (4) 129 card punch with interpreter, and (5) 514 card reproducer.

The following interactive terminals are the property of the research and development division: (1) Data Point 3000, CRT and (2) LSI ADM-1, CRT. These CRT's provide linkage with the central computer and give the center the capability to interface via telephone lines with computer equipment throughout the United States.

Additional property of the center includes a mobile televan unit; video taping and playback equipment; slide-tape show equipment; and assorted typewriters, dictating and transcribing units, audiotape recorders, and duplicating equipment.

CURRENT NIE PROJECTS

Project EVALUATION OF TEACHING

Objectives and strategies. This project is exploring and clarifying methodological issues and problems in teacher-effectiveness research, with the goal of improving the quality of research in the field. A data base collected in fifth-grade classrooms during the 1974-75 school year is being used as input for these methodological studies. The project is concentrating on 10 major tasks, including the following:

- Development of statistical methods for the analysis of interactions between instructional treatments and pupil characteristics.

- Development of strategies for the identification of chance-produced significant results in large multivariate studies of teacher behavior.
- Preparation of reports comparing or contrasting the relationships found between teacher behaviors and student outcomes where a number of different analysis techniques are employed.
- Preparation of a sourcebook of classroom research and teacher-evaluation instruments.
- Development of conceptual frameworks and organizational structures for the appraisal of teaching in school settings.
- Review of relationships between teacher behavior and pupil self-concept with recommendations for future research and current classroom practice.

Status. Work on this project is in progress. The contract expires September 30, 1976.

Funding.

Fiscal year 1974	$111,752	(*13%)
Fiscal year 1975	204,802	(*24%)
Fiscal year 1976	180,738	(*26%)
Total	497,292	

*Percent of institutional total.

Accomplishments. Representative of one aspect of the accomplishments of this project's staff was the design and completion of a major summative evaluation study of the center-developed personalized teacher-education program. This work incorporates promising methodological refinements in the evaluation of complex programs in real-life settings.

Monitoring history.

Dates	Project officer	Activity
March 1974 to present	Virginia Koehler	General monitoring.

Dates	Project officer	Activity
January 1974		Site review by Garry McDaniels, Virginia Koehler, and Arthur Wise.
Aug. 15, 1975		Workshop with many researchers, NIE, California State Department.

Project CORRELATES OF EFFECTIVE TEACHING

Objectives and strategies. The main objective of this project is to expand the number of teaching principles based on documented findings from systematic classroom research. The problems and processes studied have been selected on the basis of observation of and consultation with teachers and school personnel. The aim is not so much to develop new curriculums or methods as to study classroom processes in order to discover how these processes can be conducted to the greatest advantage of teachers and individual students.

The project concentrates on four major tasks: (1) Analysis and reporting of an observational study attempting to link teacher characteristics with student learning gains in second- and third-grade classrooms. (2) A study following up on earlier work on teacher expectations and attitudes designed to identify student attributes and behaviors which influence teachers' perceptions of, and behavior toward their students (the "Student Attribute" study). (3) The junior high school study, a followup on the earlier second- and third-grade study of the influence of teacher characteristics on students' achievements. The work was carried on in 136 seventh- and eighth-grade English and math classrooms. Student attitudes and achievement gains are used as criteria, and data are taken on individually targeted students as well as the class as a whole. Each teacher is observed in two separate sections, in order to take into account the effects of different intact classrooms of students on the behavior of teachers. (4) The first-grade study is an experimental study involving three groups: One treatment observed, one treatment not observed and one control-group observed. Group comparisons and correlational data will reveal the degree to which 21 principles of small-group instruction were successful in producing student learning gains in reading and the degree to which training was successful in causing teachers to implement the principles systematically in five educational contexts.

Status. Work on the project is now in process. The contract expires September 30, 1976.

Funding.

Fiscal year 1974	$251,948	(*28%)
Fiscal year 1975	207,000	(*24%)
Fiscal year 1976	170,000	(*24%)
Total	628,948	

*Percent of institutional total.

Accomplishments. Reports have been written up from the four parts of this project.

Monitoring history.

Dates	Project officer	Activity
March 1974 to present	Virginia Koehler	General monitoring.
January 1974		Site review by Garry McDaniels, Virginia Koehler, and Arthur Wise.
Aug. 15, 1975		Workshop with many researchers, NIE, California State Department.

Project PROCEDURES FOR ADOPTING EDUCATIONAL INNOVATIONS

Objectives and strategies. The project is committed to research and development efforts that will make the process of adopting innovations more economical, efficient, and personalized. This work is based on the experience of practitioners and the literature by way of a well-defined conceptual model,the concerns-based adoption model (CBAM). The CBAM views the implementation of innovations as entailing developmental growth by each member of the user system. Measurement procedures for quantifying two key dimensions of change as experienced by the individuals involved are being developed and applied in field-based research studies. These measures and concepts can be employed by change specialists as diagnostic and prescriptive tools for planning and facilitating the innovation adoption process. The project's work also has implications for managers of the change process and prouct evaluators alike. For example, the measures provide a valid approach to determining if, in fact, an innovation has been implemented.

Due to the heavy field orientation of the project's work, a large number of practitioners in schools (especially elementary) and in teacher-training institutions are cooperating in data collection. Over 400 teachers and 400 professors have been participating in a set of longitudinal studies of innovation implementation. The study design has entailed use of a specially developed psychometric questionnaire for assessing the "concerns" of innovation users and a focused interview for assessing their level of use of the innovation.

Status. Work on this project is in progress and is planned for continuation through September 30, 1977.

Funding.

Fiscal year 1974	$201,037	(*23%)
Fiscal year 1975	289,270	(*34%)
Fiscal year 1976	242,105	(*34%)
Total	732,412	

*Percent of institutional total.

Accomplishments. Recent accomplishments include (1) the development of a model that describes the collaborative, highly adaptive, and systemic process of innovation, adoption, and implementation, especially as seen and performed by the individual members of the user system; (2) development of two measurement systems for effectively assessing innovation user concerns and their level of use of an innovation; and (3) collection of quantitative data in both school and college settings that appear initially to verify the existence of the criterion variables defined in the model.

Monitoring history.

Dates	Project officer	Activity
March 1974 to November 1975	Virginia Koehler	General
January 1974		Site review by Garry McDaniels, Virginia Koehler, and Arthur Wise.
November 1975 to present	Joe Vaughan	General monitoring.
December 1975		Site review by Joe Vaughan.

Project TEACHING-LEARNING INTERACTION

Objectives and strategies. This project is committed to two main objectives: (1) The development of valid methods for assessing the effects on individual learners of both cognitive and affective influences from teachers, peers, and family. (2) The development, testing, and dissemination of methods for improving the effects of school experience.

The current phase of the project is a basic research study, of pilot size, which investigates how particular teaching strategies affect individual students from a variety of socioeconomic and cultural backgrounds. Working with 57 volunteer teachers and 1,800 sixth-grade black, Latin, and Anglo pupils from the Austin, Tex., schools, and with 27 teachers and 900 pupils from the fourth through seventh grades in the Daviess County, Ky., schools, the project is assessing children's learning of basic skills, attitudes, self-concept, and coping skills. Parallel assessment and observational data on teachers are being collected. By relating specific teacher characteristics, attitudes, and behavior to student outcomes, this project seeks to identify the most effective ways to teach particular kinds of children.

Status. Work on this project is in progress. The contract expires September 30, 1976.

Funding.

Fiscal year 1974	$ 72,761	(* 8%)
Fiscal year 1975	148,943	(*18%)
Fiscal year 1976	131,702	(*16%)
Total	353,406	

*Percent of institutional total.

Accomplishments. Statistical model and instruments have been developed which can identify the effects of different kinds of instruction (or instructors) on different kinds of students. A system has been devised for identifying the objectives of an educational program, identifying the specific learning needs of individual students at the outset (affective as well as cognitive), describing the instructional process, and measuring the effects on individual learners by the end of the program.

Some of the assessment and observation instruments are also being used, in a concurrent project led by Sandefur and Adams, of Western Kentucky University, to evaluate the effects of preservice training on inservice teaching behavior and its effects on pupils.

Monitoring history.

Dates	Project officer	Activity
March 1974 to present	Virginia Koehler	General monitoring.
January 1974		Site review by Garry McDaniels, Virginia Koehler, and Arthur Wise.
Aug. 15, 1975		Workshop with many researchers, NIE, California State Department.

COMPLETED OR TERMINATED NIE PROJECTS

Project PERSONALIZED TEACHER EDUCATION

Objectives and strategies. This was designed to be an efficient, cost-effective, integrated training program for preservice teachers, based on a model that used student-needs assessment to facilitate student learning.

Status. After two main revisions in 1972 and 1973, it was determined that the curriculum-development activities should be terminated and the basic research aspects supported and strengthened. The current NIE-funded projects are outgrowths of this program.

Funding.

Fiscal year 1973	$600,000	(*73%)
Fiscal year 1974	185,000	(*21%)
Total.	785,000	

*Percent of institutional total.

Funding.

Fiscal year 1973	$600,000	(*73%)
Fiscal year 1974	185,000	(*18%)
Total	785,000	

*Percent of institutional total.

Accomplishments. As tested products become available, the center developed across the Nation a collaborating network of teacher-education institutions committed to the installation of various components of the personalized teacher-education program.

Monitoring history.

Dates	Project officer	Activity
August 1972		Site review by Barak Rosenshine, Byron Hansford, Don Ely, Margaret Chisholm, Ken Howey.
August 1973		Site review by Barak Rosenshine, Clyde Davis, Dotie Wilkerson, Ken Howey, Virginia Koehler.
December 1972- September 1973	Bill Cody, Mary Johnson	General monitoring.
September 1973- March 1974	Virginia Koehler	General monitoring.

Project INTERINSTITUTIONAL

Objectives and strategies. The purpose of this program was to continue to provide technical assistance to teacher-training institutions which were adopting elements of the personalized teacher-education program.

Status. This program was funded for 1 year following the termination of the personalized teacher-education program.

Funding.

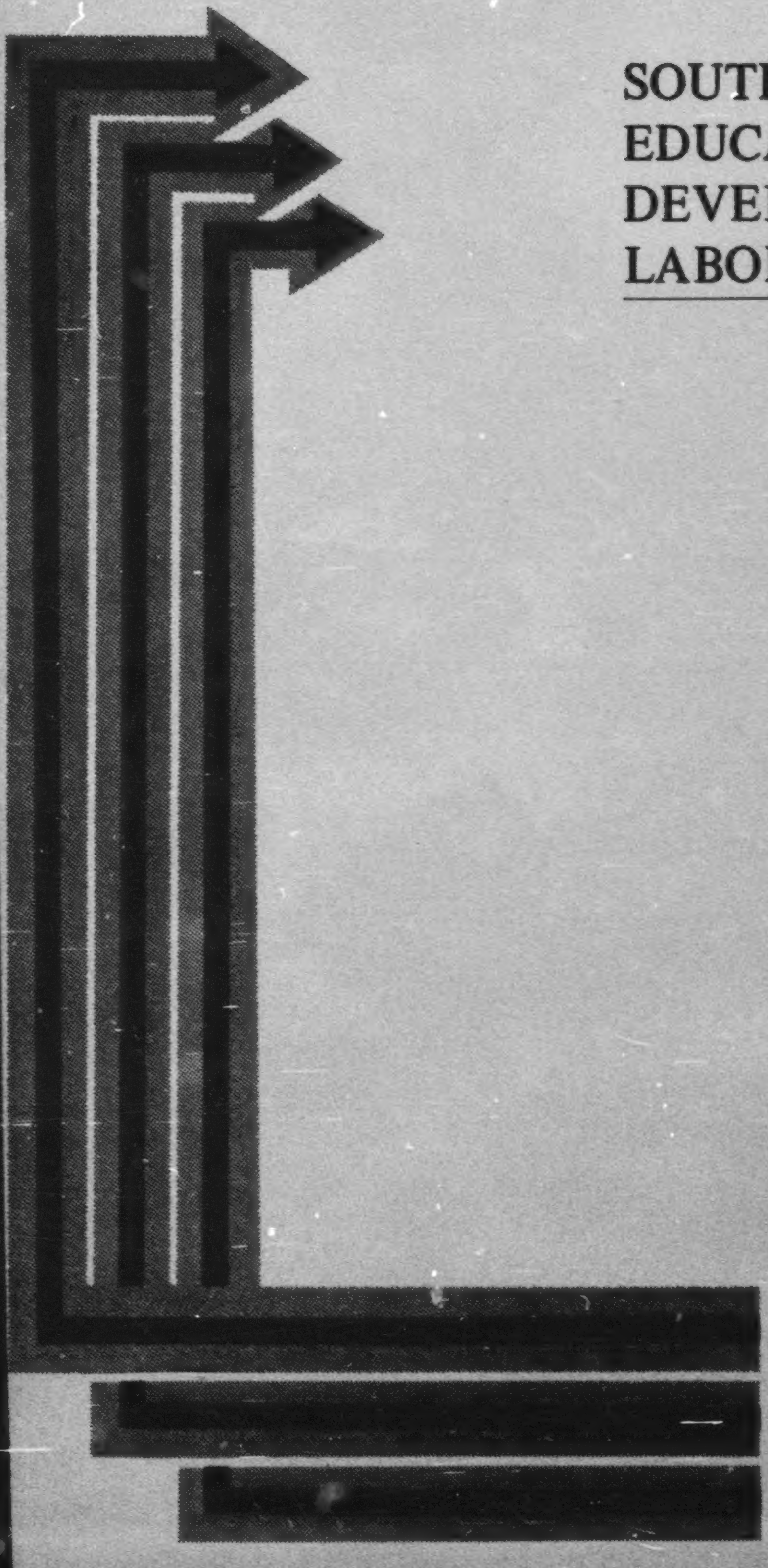
Fiscal year 1974 . . . . $66,931 (*7%)

*Percent of institutional total.

Accomplishments. Some 50 colleges and universities across the United States and Canada were collaborating at one time with the center.

Monitoring history.

Dates	Project officer	Activity
March 1974 to January 1975	Virginia Koehler	General monitoring.



SOUTHWEST EDUCATIONAL DEVELOPMENT LABORATORY

James Perry, Executive Director

211 East Seventh Street
Austin, Texas 78701

(512) 476-6861

SOUTHWEST EDUCATIONAL DEVELOPMENT LABORATORY

Mission The articles of incorporation of the Southwest Educational Development Laboratory (SEDL) define the institution's goals as "including but not restricted to" the following:

- To identify educational problems, with special consideration of, and particularly those which relate to, the culture and economy of the Southwestern United States.
- To serve as a new institution to bring the total resources of the region, and other outside resources, to bear upon the solution of educational problems.
- To train individuals for professional and technical leadership in educational research, development, and dissemination activities.
- To assure the attainment of educational improvement through implementing innovations directed toward change in educational practice.
- To cooperate with all agencies, institutions, foundations, professional and learned societies, business and industrial groups, research centers, and other similar organizations having activities or interests for achieving the same or similar objectives.
- To carry on any other activity necessary for implementing the foregoing purposes.

SEDL was conceived in 1966 as part of the national network of regional educational laboratories authorized by title IV of the Elementary and Secondary Education Act (1965). At that time, a planning board of educators from Texas and Louisiana defined the institution's problem focus as follows:

> "The problem focus is intercultural education with the aim of providing educational experiences adapted to the unique backgrounds and needs of the diverse population groups of this southwestern region--Spanish, Negro, French, and the entire spectrum of Anglo-American, socioeconomic variances. The cultural richness of each segment of the population will be emphasized--through the arts, through language study, and through better understanding of ethnic heritages."

The institution views its role as comprising three broad functions: (1) Basic research, (2) applied research, and (3) product and information dissemination. These functions are discussed individually in the following paragraphs.

Basic Research. SEDL regularly conducts basic research in areas of concern to the education of American children. Among recent basic research studies which the laboratory has undertaken are—

- Bilingual Schooling in the United States (1970). A definitive status study of bilingual education practices across the Nation.
- Context Analysis: Early Childhood Education (1973). A comprehensive national needs-assessment and status study in early childhood education.
- Texas Education Product Study (1974). A survey of 15,000 former students in 89 school districts to determine how public education in Texas has responded to the career preparation needs of its students.
- Research in Culturally Based Learning/Teaching Behaviors (presently under way). A study undertaken in response to the "Lau Task Force Report" of the U.S. Commission on Civil Rights.
- The Northside I.S.D. Bilingual/Bicultural Demonstration Project (presently under way). A field-based study to determine the relative effectiveness of alternative bilingual education models.

As part of its basic research effort, the laboratory encourages and provides the opportunity for professional staff to pursue their own educational and professional interests. A list of selected dissertations, monographs, articles, and papers which have been completed by laboratory staff while employed by the institution may be found under section E: "Staff Development."

Applied Research. Applied research is defined as the systematic utilization of available knowledge and technical resources for the solution of specified problems. Successful applied research activities lead to either the solution or the redefinition of targeted problems. SEDL's applied research effort comprises four kinds of activities: (1) Product development, (2) technical assistance, (3) evaluation, and (4) training.

At present, four laboratory divisions are involved in product development activities. The four educational areas addressed by those divisions are early childhood education, early elementary education, special education, and bilingual and migrant education. Laboratory products in these and other areas have been used by more than 300,000 children in 22 States, Guam, and Puerto Rico.

Evaluating effectiveness of educational programs and projects is both an internal and an external SEDL activity. The laboratory maintains a separate evaluation unit which provides formative and summative evaluation reports on all internal projects; in addition, it conducts separate evaluation activities. For instance, it recently evaluated nine projects in the areas of mental retardation, cerebral palsy, and epilepsy, under contract with the Louisiana Developmental Disabilities Council. It also has evaluated materials and publications' conferences for one of the Nation's area learning resource centers for special education.

Product and Information Dissemination. Laboratory staff believe that educational R. & D. should be consumer oriented. This means that R. & D. activities respond to ascertained needs, and that the dissemination of educational innovations is systematically managed.

In pursuit of these goals, the laboratory conducts regional and national conferences on various topical areas within education.

In 1967 and 1968, SEDL conducted landmark conferences on the special educational needs of migrants. In 1968 it conducted the first national conference on educational opportunities for Mexican Americans. In 1973 and 1974, SEDL conducted several major conferences on bilingual education; the results of these conferences were drafted into a monograph entitled Proceedings of the National Planned Variation Bilingual Models Conference. In June 1976, SEDL conducted a national conference on the educational implications of the recent Supreme Court decision, Lau v. Nichols.

The laboratory also publishes research studies on different aspects of bilingual, migrant, and multicultural education. The proceedings of the 1967 and 1968 migrant education conferences have been published in monograph form, as have the proceedings of several SEDL conferences on bilingual/multicultural education; these now appear in the ERIC system. The laboratory also maintains a series of informal monographs that report SEDL-sponsored research findings and the professional papers published by laboratory staff. Since 1974, SEDL has also published a series of papers in sociolinguistics. The series, entitled, "Working Papers in Sociolinguistics," is presently sent to over 400 readers in 22 countries.

SEDL also distributes products and information through linkages between the institution and members of the educational community.

A description of the linkage systems is presented under the heading "Institutional Relationships."

The effect of this linkage is to connect SEDL with different educational consumers such as teachers, students, and parents, so that its basic and applied research meet actual field needs.

Governance

The laboratory is a not-for-profit corporation governed by a self-perpetuating 24-member board of directors, with board and staff assisted by task-specific advisory groups.

Composition of the board of directors reflects the ethnicity of the laboratory's target population, the geographical region, and public and private elementary and secondary education, public and private higher education, business, labor, foundations, and professions. The board meets a minimum of three times a year, with an eight-member executive committee convening more frequently. The board determines institutional policies, and employs an executive director, who is responsible for employing staff and managing the institution according to the written board policy.

The board trains new members elected to its body with annual formal orientation sessions, and provides guidance to them with a handbook, SEDL Profile: A Guidebook for Board Members. Regular communication is maintained through a newsletter, Memogram to Board Members. The board provides each SEDL staff member with a copy of The Laboratory Handbook, a 300-page document defining board policy, administrative policy, and administrative procedures.

The current board is composed of 7 black, 4 Mexican American, and 13 Anglo members from a variety of professions and occupations in Texas and Louisiana. Three are female. The three officers represent the three ethnic groups.

Advisory committees are appointed for specific tasks and are convened to achieve well-defined objectives. The number of advisory committees has varied from 12 in 1969 to 4 in 1976. Reports are filed for both management and policy use.

Current groups are the Committee on the Protection of Human Subjects (bimonthly); Advisory Committee on Television (quarterly); Advisory Committee on Language Desegregation (quarterly); and Advisory Committee on Ethnic Heritage--principally white ethnic (quarterly). All committees are multiethnic; one is national in scope.

Management The organization of the institution and the administrative procedures which it uses have been developed to assure sound decisionmaking in an unstable environment.

Management of SEDL is achieved through delegation of operational responsibility to 15 budget authorities; through use of a management advisory team; and through a human-relations committee.

Internal operations are directed by the executive director, assisted by the associate executive director, who serves as both an institutional deputy and director of support divisions. (See Figure 1.) Three institutional divisions—evaluation and research, resource development and planning, and television/film development—report directly to the office of the executive director. All program divisions, currently six, also report directly to the office of the executive director: Bilingual and migrant education, follow through and ethnic heritage, special projects, early elementary education, early childhood education, special education-regional resource center. The six support divisions report to the office of the associate executive director: Personnel services, fiscal and computer services, field relations and dissemination, media development, television production, and office services. The budget authority of each division is responsible for its resources (time, personnel, budget) and for its task performance.

Assessment of operations is conducted by a nine-member management advisory team, appointed by the executive director. It meets regularly with him to analyze institutional problems and to recommend administrative practices. The umbrella view of the team assures that organizational units can be highly differentiated yet achieve cooperation.

Management of personnel to assure positive motivation and productivity is aided by an active human-relations committee, which meets regularly to advise the executive director of employee concerns.

Institutional planning and decisionmaking are directed by the office of the executive director, with the division of resource development and planning providing staff support. Planning is conducted in a six-stage cyclical fashion, with opportunity for involvement by the total staff and with major leadership from the management advisory team.

Programmatic and quality-control review is directed by the office of the executive director with assistance from the

Figure 1. Organizational structure

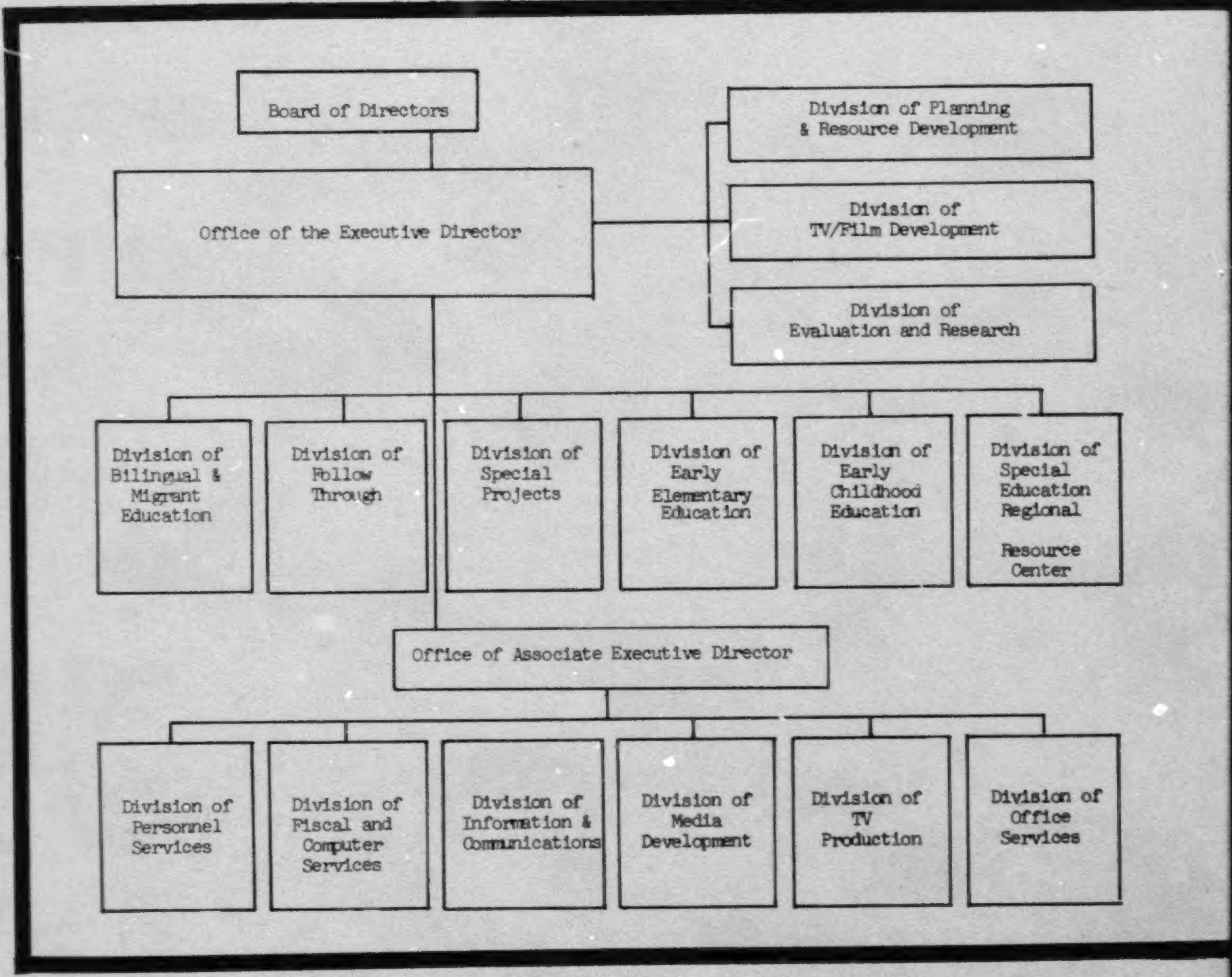
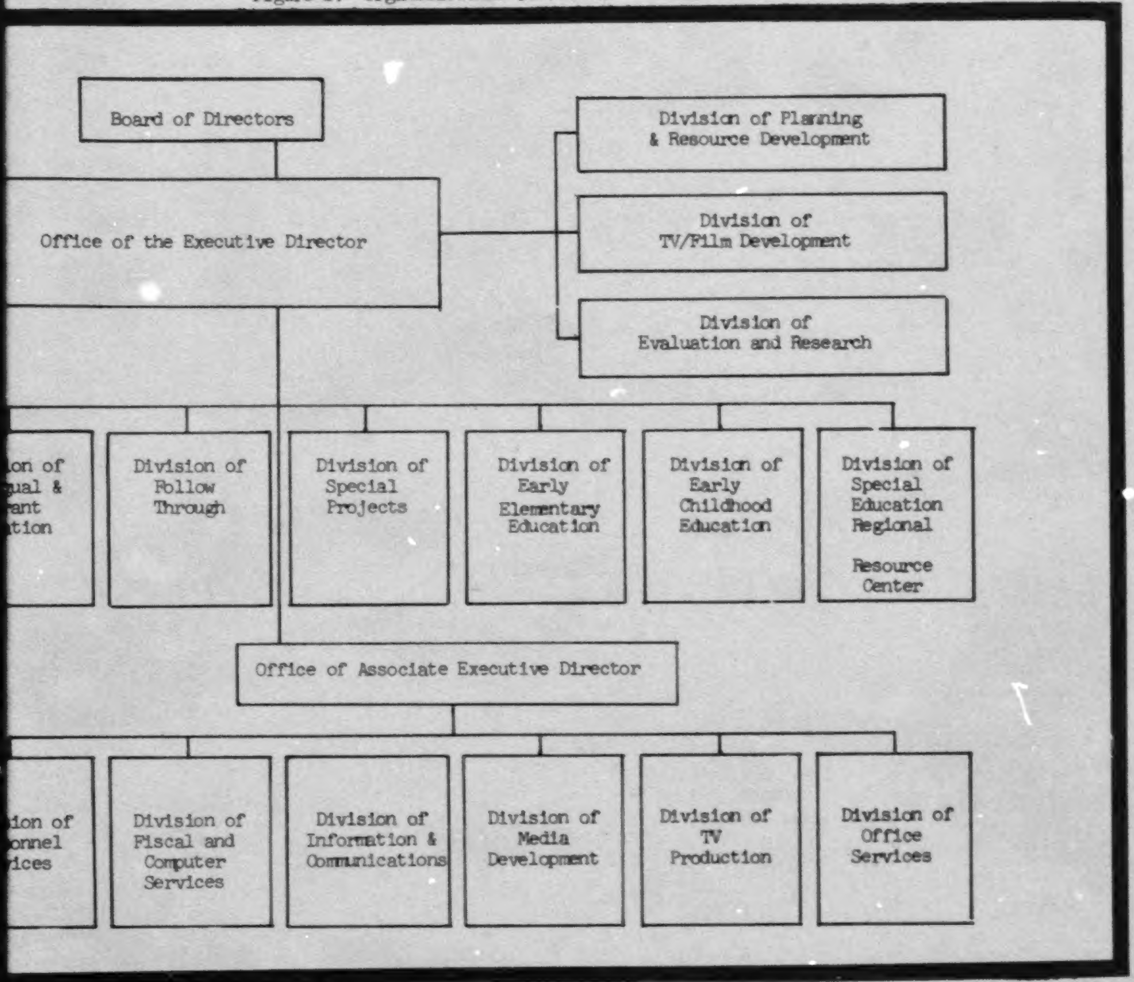

Board of Directors
Office of the Executive Director
Division of Planning & Resource Development
Division of TV/Film Development
Division of Evaluation and Research
Division of Bilingual & Migrant Education
Division of Follow Through
Division of Special Projects
Division of Early Elementary Education
Division of Early Childhood Education
Division of Special Education Regional Resource Center
Office of Associate Executive Director
Division of Personnel Services
Division of Fiscal and Computer Services
Division of Information & Communications
Division of Media Development
Division of TV Production
Division of Office Services

Figure 1. Organizational structure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ion of onnel ices
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Division of Information & Communications
Division of Media Development
Division of TV Production
Division of Office Services

management advisory team. Staff assistance is provided by the division of resource development and planning. The total review is a 13-stage process.

Input from the division of evaluation and research occurs in stage 3. Evaluation formative and summative is directed and conducted by this separate division, operating as a semi-autonomous unit reporting its findings directly to the office of the executive director.

Staff

The SEDL staff is composed of 155 members, 71 of whom are professional program staff, 40 professional support staff, and 44 clerical staff.

Staff Development

SEDL has made and sustained a major commitment to the continued growth and development of its staff. It encourages staff growth within the organization by making available four types of resources for professional growth activities. These resources include financial support for schooling and professional conferences or similar meetings; internal support in the form of services such as typing, editing, and media for professional papers; time to conduct research, write professional papers, or attend classes; and institutional sponsorship of internal staff programs that focus on professional/managerial topics such as evaluation, product development, educational television, and staff management techniques.

SEDL has, since its founding in 1966, maintained an institutional Educational Assistance program. The purpose of the program is to encourage both professional and clerical staff either to complete their college education or to pursue and complete graduate and doctoral-level degrees.

As a result of this institutional commitment to continuing education, several dozen degrees have been secured, 16 at the doctorate level.

In addition to professional programs in formal college or university settings, SEDL sponsors internal professional seminars and colloquia.

The purpose has been either to introduce staff to topical areas or to present a series of presentations on a major R. & D.

Table 1. *Staff discipline profile

SUBSTANTIVE FIELD OR DISCIPLINE	BACHELOR'S DEGREE	MASTER'S DEGREE	DOCTORAL DEGREE
Accounting		1 (CPA)	
American civilization			1
Anthropology		3	
Art history		2	
Bilingual education		3	
Business administration	2	1	
Child development	1		
Classics	1		
Clinical psychology		2	
Communications	1		
Communications disorders			1
Computer science	1		
Counseling psychology		1	
Curriculum and instruction		1	4
Developmental psychology		1	
Drama	1		
Drama/art	1		
Early childhood		4	
Education	5		
Educational administration		4	3
Education leadership			1
Educational psychology		2	1
Electrical engineering	1		
Elementary education	15	5	
English	14	2	
ESL instruction		1	
Fine arts	2		
Folklore		3	
Foreign language education		1	
General studies	1		
Government	1		
History	2		
Home and family relations	1		
International trade	1		
Journalism	1		
Library science		10	
Linguistics	1	2	
Mathematics	1		
Music education	1		
Political science	1	1	
Psychology	17	6	
Radio/TV/film	3		
Reading		1	
Religion	1		
Religious education		1	
Science	1		
Science education	1		
Social psychology		1	
Sociology	3		
Spanish	8		
Special education		2	
Speech	1		
Speech/drama	1		
Speech pathology	6	3	

*All degrees for all staff.

Table 1. *Staff discipline profile

IPLINE	BACHELOR'S DEGREE	MASTER'S DEGREE	DOCTORAL DEGREE
		1 (CPA)	
			1
		3	
		2	
		3	
	2	1	
	1		
	1		
		2	
	1		
			1
	1		
		1	
n		1	4
		1	
	1		
	1		
		4	
	5		
n		4	3
			1
		2	1
	1		
	15	5	
	14	2	
		1	
	2		

SUBSTANTIVE FIELD OR DISCIPLINE	BACHELOR'S DEGREE	MASTER'S DEGREE	DOCTORAL DEGREE
Folklore		3	
Foreign language education		1	
General studies	1		
Government	1		
History	2		
Home and family relations	1		
International trade	1		
Journalism	1		
Library science		10	
Linguistics	1	2	1
Mathematics	1		
Music education	1		
Political science	1	1	
Psychology	17	6	1
Radio/TV/film	3		
Reading		1	
Religion	1		
Religious education		1	
Science	1		
Science education	1		
Social psychology		1	
Sociology	3		
Spanish	8		
Special education		2	1
Speech	1		
Speech/drama	1		
Speech pathology	6	3	

es for all staff.

area. Among topics covered under this program have been the following:

- Curriculum/product development.
- Formative and summative evaluation for product development.
- Small-project evaluation.
- Instrument design and use.
- Language acquisition and development.
- Demographic data collection and analysis.
- Early childhood development.
- Piagetian applications to product development.
- Informal learning.
- R. & D. in the seventies and eighties.

SEDL was conceived as an institution that would not only conduct educational research and development activities but would also provide a training ground for young staff to be trained in R. & D. skills. The laboratory has given particular attention to hiring minority individuals, and over the years has provided hundreds of individuals from minority and Anglo ethnic background with both work and learning opportunities. Evidence of this is reflected in the number of professional staff that have come to SEDL with varying degrees of experience and academic qualifications, and have left to assume major roles in educational R. & D.

The laboratory has also maintained internship programs. At present the Internship program (funded by the National Institute of Education) is open to both undergraduates and graduates in early childhood and early elementary education. Some special projects within the institution have internships or work/learning experiences built into them. Two current examples include internship within a special education project to develop curriculum materials for 4- and 5-year-old Mexican American handicapped children, and within a television series for high school Mexican American teenagers.

The laboratory also provides, on a regular basis, practicum for individuals completing graduate degrees. These interns are placed in either ongoing projects within the laboratory or are given experiences across several support divisions. For a number of years, SEDL has participated with the Ford Foundation-sponsored minority program in education, which offers a 4-month internship to Mexican American participants.

Since 1966, the laboratory has regularly underwritten the cost of staff development for its employees through attendance at conferences, conventions, seminars, training sessions, and meetings of learned societies.

The laboratory has also supported professional growth through attendance at training sessions offered by other institutions. Special training programs organized and presented by American Management Association, for example, have been attended by SEDL staff.

Training Provided to Others

Since 1966, SEDL has provided training to individuals and organizations throughout the educational community. The training has been of three types: Training related to materials development and testing, training relating to the needs of special populations, and training related to educational research and development. The primary organizational recipients have been schools, school districts, State education agencies, and national/regional professional organizations. Individual recipients have been teachers, school administrators, State educational department officials, and professional educators in university or other R. & D. settings.

Most of the training provided by SEDL has been concerned with preparing teachers to use SEDL-developed curriculum materials. The laboratory's development process calls for extensive pilot and field testing; as a corollary, each test of the materials also calls for appropriate teacher training. In some cases, school administrators and parents are also given training. During the last 5 years, SEDL curriculum products have been used with over 300,000 students and 10,000 teachers in 25 States.

In addition the laboratory has provided training related to needs of special populations; this training has focused particularly on the needs of bilingual, multicultural, and migrant education. Over a dozen training programs for the Texas State Department of Education have been designed and carried out on bilingual and migrant education topics.

The laboratory also acts under contract to both State and regional educational service centers in Texas to design and implement teacher training programs. One such program was an SEDL-designed program to train teachers to adapt Piagetian theory to the teaching of handicapped children. The laboratory also acted under contract to a regional educational service center in Texas to design a program to train secondary teachers to develop and adopt curriculum for use with high school level L/LD students.

SEDL conducts and sponsors State and national conferences and workshops in which training is either directly or indirectly furnished to participants. In 1967 and 1968, for example, SEDL focused on minority education needs with two national conferences on education for the economically disadvantaged; the proceedings of the conferences have been published in a monograph form. In May 1974, SEDL conducted a conference funded by NIE that addresses the most effective methods of utilizing television to reach parents and children in low economic settings. In 1976, SEDL plans to hold a national conference on the effects of the recent Lau court decision, as well as to continue to host and direct conferences and workshops on pertinent national educational topics.

Training has also been provided to individuals and to groups on different aspects of educational research and development. Teachers, administrators, and other professionals in education have been trained in curriculum development, product and project evaluation, and the design and use of multimedia.

The laboratory has planned and conducted numerous conferences in Texas and Louisiana on many aspects of educational research and development. Hundreds of teacher-training sessions, and special conferences for professionals, special educators, and administrators involved in bilingual/bicultural programs have been conducted by the laboratory. In 1969, 1973, and 1974, SEDL cohosted with the Texas Education Agency a series of conferences on Piagetian theory; Piagetian scholars from Italy, Germany, and Switzerland, as well as the United States, were convened to discuss the applicability of Piagetian theory to special education.

In 1973, SEDL conducted a national conference on the special needs of curriculum evaluation and testing for culturally different students; again, the proceedings were published in monograph form.

SEDL has consistently maintained its commitment to meeting educational needs of both minorities and women. Training has largely been in the use of curriculum materials for special cultural or language populations, and in the application of research and development techniques to educational problems.

The majority of SEDL-developed products have been for minority children, teachers, and parents; as a consequence, the majority of recipients of laboratory training have been minority individuals. Many of the programs specially designed for State department of education or regional educational organizations have been based on SEDL expertise in bilingual and multicultural education; subsequent participants in these programs have been largely minority individuals. In one recent undertaking, SEDL developed a curriculum package and teacher-training component for children and teachers who were of German, Czech, and Polish heritage in Texas; the teacher-training component took into consideration the special cultural and language characteristics of both teachers and students.

Women, by and large, have been the majority participants in the SEDL training programs. Through internship programs, SEDL has provided professional and management experience to women in education.

SEDL is located in close proximity to a major State university (the University of Texas at Austin) and a private university (St. Edwards University). In addition, there are two other universities within 30 miles of the city. This proximity to graduate programs makes possible a profitable exchange between the laboratory and qualified students.

SEDL employs graduate students as part-time employees and arranges formalized internship programs for graduate schools to arrange individual inter/practicum programs.

The institution has also opened its resources to graduate students in fields related to laboratory work. Two major resources that are available are (1) SEDL research library, and (2) its data bank on student performance on standardized tests. The laboratory's research library maintains a complete and up-to-date ERIC microfiche collection. These facilities have been made available to students upon request for inhouse use of the collections.

SEDL also retains test scores made by children on a variety of standardized instruments (such as the CAT and SAT). This information is indexed by geographical location, ethnicity, age, and sex. Qualified graduate students may have access to score data (the information does not contain personal student data) under controlled circumstances.

Technical assistance activities range in scope from large programs such as Follow Through and the management of a national bilingual education model using laboratory-developed materials in Texas, Louisiana, California, and Pennsylvania—to small-scale efforts such as the development of a management information system for Virginia State College.

Institutional Relationships

SEDL maintains linkages with other educational institutions for four purposes: (1) To explore common problems; (2) to develop, test, and disseminate materials; (3) to exchange information/knowledge, and (4) to work cooperatively on joint ventures. As a part of such groups as the Education Commission of the States and the Rocky Mountain Educational Consortium, it explores problems and seeks solutions—often with policymakers. Its demonstration centers in Texas, Washington, California, Louisiana, and Ohio form a dissemination network for SEDL R. & D. products. Sites in Texas, California, Pennsylvania form a testing and demonstration network for the SEDL Bilingual Follow Through model. Sites in 4 States form a migrant day care center network trained by SEDL staff local schools in 12 States work with the institution in developing materials; 46 television stations in 6 States also assist in testing TV spots and related materials developed by the laboratory. SEDL maintains a working relationship with several universities and colleges (University of Texas at Austin, University of Texas at San Antonio) conducting parallel research; and with State departments of education in Texas and Louisiana to exchange information on consumer needs. It is linked with other R. & D. laboratories and centers to pursue joint ventures: dissemination of materials and information and bidding.

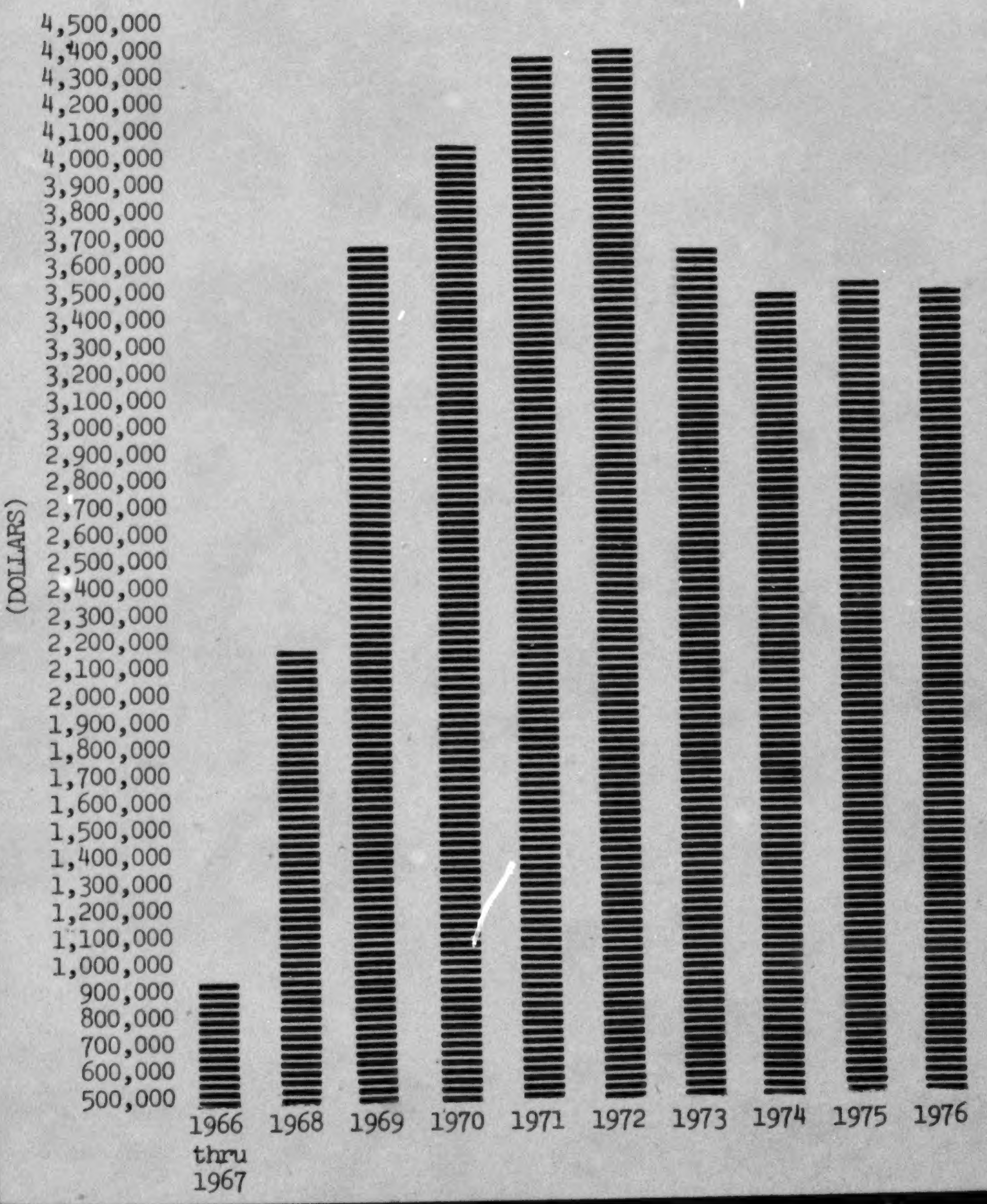
Facilities

The Southwest Educational Development Laboratory is housed in 90,000 square feet of specifically designed space covering 6 stories of the 13-story Southwest Tower in the center of the Austin business district. The Southwest Tower is a condominium project in which SEDL owns 51 percent interest, constructed with a $4.1 million USOE facility grant awarded in 1969. The new facility occupied in October 1973 is all open-office landscape space. The acoustical screens, plants, and movable power poles provide maximum flexibility for adapting work areas to particular and rapidly changing space needs. With maximum utilization of all space and special purpose areas, a staff of 400 could be accommodated.

The facility contains several special purpose areas which are partitioned off from general staff-work areas. These special areas are—

- Two soundproof recording studios equipped to produce and duplicate broadcast quality reel-to-reel and cassette tapes.
- Television studio and control room equipped to produce and duplicate broadcast quality 2-inch color video tapes, equipped with two cameras, two video recorders, and time code editing equipment.
- A microwave facility with bidirectional television conference room permitting interactive communications on the Texas telecomputer grid for transmission of instructional TV.
- A learning center for young children, containing kitchen, miniature toilets, one-way observation glass, two equipped classrooms with remote control monochromatic TV cameras and a TV control center with audio and video taping capabilities.
- A computer room with auxiliary air-conditioning equipment and a computer-type floor, and an IBM System/3 computer with support keypunch and reader equipment based in the area.
- A small group training room equipped with a projection booth, electrically driven front projection screen, and a chalkboard/tackboard wall unit.
- Shops for electronic equipment maintenance and a woodworking shop for construction of stage sets.
- A preview room with an audiovisual equipment bank for small-group screening of film, slides, transparencies, filmstrips, and video cassettes.
- Complete photographic center with darkrooms equipped for color and monochrome enlarging and color and monochrome processing, filmstrip production equipment, stat cameras, diazo processing equipment for overhead transparencies, slide and transparency mounting equipment, and graphic producing equipment.
- A training workshop center which provides auditorium seating for up to 150 persons or workshop arrangement for up to 75 persons.
- A research library complex which provides for security but maintains the open environment. Three enclosed carrels are provided for use of audio or microfiche materials.
- A conference room (capacity 50) equipped with a rear projection screen, rear projection remote-controlled 16mm movie and 35mm slide equipment plus dissolve-control 35mm equipment for two-screen presentations.

Figure 2. Funding history



- A print media duplicating unit equipped with two offset presses, platemaker, two collators, stitching and binding equipment. IBM composing equipment is available in the media unit.
- A supply store, mailroom, snackbar, and telephone switchboard occupy two rooms on the lower level.
- A central file unit with overhead sprinkler system.
- A 115-car SEDL parking facility is located adjacent to the Southwest Tower and is an additional part of the condominium project.

CURRENT NIE PROJECTS

Project EARLY ELEMENTARY EDUCATION PROGRAM

Objectives and strategies. This program is made up of three components which taken together seek to strengthen and improve the communication and arithmetic skills of children in K-3 multicultural classrooms. Briefly, the objectives and strategies of each component are as follows:

Thinking and Reasoning. Utilizing research-based materials and instructional modes this component seeks to develop and improve the personality skills, analytic-thinking skills, problem-solving process skills, and process awareness and control skills of K-3 multicultural students.

Exploring Number Concepts. Using sequential, individualized instructions, this component seeks to—

- Move the child from known concepts; i.e., size, shape, and color to unknown concepts such as number relationships and number sequencing.
- Increase the child's capacity to develop math skills through a visual-aural mode not common to traditional curriculum.
- Provide a continuous progress curriculum implemented by a system of diagnostic testing which insures that the level and rate of learning are appropriate for each child.
- Increase the child's active vocabulary and communications skills through consistent exposure to the language of mathematics.

Multicultural Informal Learning. Using a wide range of children's folklore in a structured and controlled way, this component seeks to—

- Strengthen and develop positive feelings of self-acceptance in an ethnically integrated

social situation.
- Help children to recognize and appreciate cultural differences.
- Enhance the development of aural and oral skills, reading and writing skills, dramatization skills, and word usage.
- Impart thinking skills regardless of child's reading ability.

Status. After approval by an NIE panel this program was awarded a contract in 1972. Although originally funded for a 1-year period, the plan called for the completion of certain products that first year and projected other possible products for the year following. Current work is funded through September 30, 1976.

Funding. This program was transferred to NIE from OE in 1972. NIE year-by-year funding was as follows:

Fiscal year 1973	$675,000	(*19%)
Fiscal year 1974	867,300	(*27%)
Fiscal year 1975	627,000	(*19%)
Fiscal year 1976	500,000	(*15%)
Total	2,669,300	

*Percent of institutional total.

Accomplishments. From 1972 to date the program has completed 8 learning instructional products, 23 knowledge products, with 19 other learning products nearing completion. Learning products are currently in use in schools in 10 States, affecting approximately 60,000 children.

Monitoring history.

Dates	Project officer	Activity
Sept. 23-24, 1972	Outside consultants, NIE staff	Major review.
July 17-19, 1974	Eunice Turk, Robert Guthrie, outside consultants	Major review.
Sept. 18-19, 1975	NIE review panel	Major review at NIE.

Project EARLY CHILDHOOD EDUCATION PROGRAM

Objectives and strategies. This program is composed of three main components, which are Parenting Center Model, Multimedia Training Packages, and TV spots of Child Rearing Principles. Each of the three components with their respective set of objectives and strategies is briefly discussed below.

Parenting Center Model. This component seeks to bring together existing but scattered and little known materials for training parents and others who work with young children. The objectives are to design, develop, and research the effectiveness of a Parenting Center Model in disseminating information about materials on parenting skills and concerns. The component has three phases: (1) To complete the initial collection and annotation of parenting materials and develop criteria for analyzing them; (2) to develop alternate dissemination strategies and complete the design for researching their effectiveness of dissemination strategies and documentation of the Parenting Center Model. A final report will include an evaluation of various formats, an evaluation of research on dissemination strategies, and documentation of all components required for replicating the model.

Multimedia Training Package for Low-Income Parents and Paraprofessionals. This component addresses the need for materials in effective communication modes (multimedia format) that provide basic knowledge and develop skills in child care. The objectives are to develop and research the effectiveness of multimedia training packages in both Spanish and English for low-income parents and paraprofessionals. Each package will deal with a major competency area of child rearing and will include a series of multimedia products—video tapes, filmstrips, audiotapes, pamphlets, etc.—each of which focuses on a subskill that will enable the learner to master behaviors that contribute to the specified goals.

The work unit has 4 milestones which together will incorporate the test phases of the SEDL development process (product design, pilot test, and field test, and dissemination) for 12 training packages. Separate packages will be developed in English and in Spanish for parents and in each language for paraprofessionals. Research data will indicate the effectiveness of this training methodology for each subgroup.

Television Spots On Child-Rearing Principles. The need is for the mass audience of adults to have easy access to information which will develop an awareness of the positive influences adults can exert on children. The objectives are to design, produce, and research the effectiveness of television spots which provide information on child-rearing practices.

There are three milestones: (1) To design and produce one pilot TV spot and supportive printed materials, and conduct audience-response research; (2) to conduct dissemination research in a five-State region on the pilot spot and to design and produce five additional spots; and (3) to test the pilot spot in other geographic regions, conduct dissemination research on five spots, produce seven additional spots (one in Spanish), and conduct audience-response research.

Since 1974 this component has been expanded and is now taking a multimedia approach (radio, billboards, newspapers, etc.) to its research on the most effective ways to disseminate materials and information on child rearing.

Status. Program implementation began in 1973; current work is funded through December 31, 1976.

Funding.

Fiscal year 1973	$675,000	(*19%)
Fiscal year 1974	605,288	(*19%)
Fiscal year 1975	816,000	(*25%)
Fiscal year 1976	980,000	(*30%)
Total.	3,076,288	

*Percent of institutional total.

Accomplishments. By the summer of 1976, the multimedia training component will have yielded five major training packages to be used by parents, paraprofessionals, and those people who do training in the child care area. The packages, both in English and Spanish, will have been created, developed, fully tested, and where necessary revised and ready for commercial publication.

By summer of 1976 the parenting information model will have been completely developed, refined, and ready for full-scale dissemination operations and/or replication at other sites.

Under the mixed media research component six major TV spots (30/60 seconds) have been developed, market tested, and fully researched along with the effectiveness measurements utilizing the press, radio, and billboards. Two of the spots are in Spanish and six are in English.

Monitoring history.

Dates	Project officer	Activity
July 23-24, 1974	Eunice Turk, Robert Guthrie, Jerrold Sandler, outside consultants	Major review.
Oct. 22-23, 1975	Carter Collins, other NIE staff	Major review.

Project BILINGUAL EDUCATION

There are two major components under this program area, a Spanish social education curriculum piece and teacher characteristic study. Each is briefly treated below.

Social Education/Spanish Translation

Objectives and strategies. SEDL English version of Social English I, II, and III had proven to be extremely effective and successful with English-speaking students. The objective then, became that of determining whether a Spanish, culturally relevant, version would be just as effective with Spanish speakers.

Status. This was funded over time, in fiscal year 1976; work will be completed September 30, 1977.

Funding.

Fiscal year 1976	$72,000 (*2%)

*Percent of institutional total.

By midsummer 1976, the entire Social Education/Spanish version will be completed and ready for commercial publication.

Accomplishments. By midsummer 1976, the entire Social Education/Spanish version will be completed and ready for commercial publication.

Monitoring history.

Dates	Project officer	Activity
Aug. 8, 1973	NIE staff, outside consultants.	Major review at SEDL.
Oct. 24, 1973	NIE staff	Program review at NIE.

*Most of the program monitors made periodic trips to SEDL throughout the period from 1972 to date.

Lau Task Force Report Project

This project has two interrelated but distinct components. These are the Lau Remedies Conference and the Bilingual-teacher characteristic study.

The Lau Conference was held in June 1976 at SEDL in Austin, Tex. At the conference several research papers dealing with various aspects of OCR's recommended remedies for school districts found not to be in compliance with the Supreme Court's Lau decision were presented. Panels of discussants and invited participants thoroughly discussed and critiqued each of the research papers. A full report of the conference will be available to all interested parties.

Bilingual Teacher Characteristic Study

Objectives and strategies. The main objective of this research will be to determine if and how the learning processes in Mexican American children are influenced by cultural background. Once such a determination is made, the objective will be to find ways to adapt instructional modes to better accommodate the learning needs of Mexican American students.

Status. During the fiscal year 1976, a fully developed research design will be formulated, thoroughly reviewed, further refined if necessary, and finally approved. It is expected that in fiscal year 1977 the implementation of the design will take place.

Funding.

Fiscal year 1976 . . . . . $97,998 (*3%)

*Percent of institutional total.

Accomplishments. Social Education Curriculum Packages have been prepared.

Monitoring history.

Dates	Project officer	Activity
Aug. 8, 1973	NIE staff, outside consultants.	Major review at SEDL.
Oct. 24, 1973	NIE staff	Program review at NIE.

*Most of the program monitors made periodic trips to SEDL throughout the period from 1972 to date.

Table 2. Current non-NIE projects

Project	Objectives and strategies	Status	Funding	Accomplishm
Follow Through Program	The USOE National Follow Through program is an experimental community action program designed to assist, in a research setting, the overall development of children enrolled in kindergarten through third grade from low-income families and to amplify the educational gains made by such children in Head Start and other similar quality preschool programs. Follow Through is designed to operate cooperatively between the Federal Government, local education agencies (LEA's), and sponsors. Grants are made to local education agencies provided for instructional, social, and other services. Sponsors are specialists in elementary education and child development advocating theories relative to the education of young, disadvantaged children who have been encouraged to work with USOE and LEA's in translating their theories into practice. These sponsors represent several models of instruction and learning. (SEDL is one of the participating sponsors in the program.)	SEDL's Follow Through program is now in its eighth year. If funding is continued, the program will be completed in June 1978.	Fiscal year: 1969..$183,151 (*5%) 1970...359,783 (*9%) 1971...481,712 (*11%) 1972...447,373 (*10%) 1973...453,186 (*12%) 1974...403,000 (*12%) 1975...382,850 (*11%) 1976...363,708 (*11%) Total 3,074,763 *Percent of institutional total.	From 1969 to 1977, SE Through program will 33,552 children (K-3) teachers (and an addit aides) in 4 States. I the Follow Through pro oped 22 curriculum ite in conjunction with th of which are— Learning Through Lan (Bilingual Early E programs). Classroom Strategies (Bilingual Early E programs). Cultural Relevancy C (Bilingual Early E program). Oral Language English III, IV.

Table 2. Current non-NIE projects

d strategies	Status	Funding	Accomplishments
l Follow Through perimental com- ogram designed to earch setting, lopment of children ergarten through low-income amplify the s made by such Start and other preschool programs. s designed to ively between the nt, local education , and sponsors. to local education d for instruc- and other services. cialists in tion and child cating theories education of aged children who aged to work with translating nto practice. present several tion and is one of the nsors in the	SEDL's Follow Through program is now in its eighth year. If funding is continued, the program will be completed in June 1978.	Fiscal year: 1969..$183,151 (*5%) 1970...359,783 (*9%) 1971...481,712 (*11%) 1972...447,373 (*10%) 1973...453,186 (*12%) 1974...403,000 (*12%) 1975...382,850 (*11%) 1976...363,708 (*11%) Total 3,074,763 *Percent of institutional total.	From 1969 to 1977, SEDL's Follow Through program will have served 33,552 children (K-3) and 1,215 teachers (and an additional 1,215 aides) in 4 States. In addition, the Follow Through program has developed 22 curriculum items to be used in conjunction with the model, some of which are— Learning Through Language Component (Bilingual Early Elementary programs). Classroom Strategies Component (Bilingual Early Elementary programs). Cultural Relevancy Component (Bilingual Early Elementary program). Oral Language English Book I, II, III, IV.

Project	Objectives and strategies	Status	Funding	Accomplishments
Ability Development Project for Five-Year-Olds	The Ability Development program is designed to assist the classroom teacher in mainstreaming the moderately handicapped child within the Bilingual Kindergarten program. Emphasis is placed upon a developmental rather than a deficit approach in classroom instruction and teacher training. The primary objective is to develop specific products which will supplement the previously developed Bilingual Kindergarten program and will provide a means of individualizing instruction for the handicapped child within the classroom.	This project was funded by the Bureau of Education for the Handicapped, USOE, for a 2-year period extending from June 1, 1975, through May 31, 1977.	Fiscal year: 1975....$108,828 1976.... 118,450 Total...227,278	Development of the infora manuals, Working with Par Handicapped Children, Tra con los padred de ninos c inhabilidades, How To Fil Toy Shelves Without Empty Pocketbook, and Como llen Estantes con juguetes sin mucho dinero, has been co These manuals are being p the Council for Exception (Reston, Va.) and will be in March 1976. Developme Spanish/English Language Screening has been comple projected publication pl the summer 1976. Supplementary classroom which include observation activity cards, and actic use by the classroom teac been designed and are be in eight classrooms in Au San Antonio, Tex. The Ol Checklists for referral pilot tested during the school year in day care garten classes. Field t the OCR will be complete 1976-77 school year.
Regional Resource Center	The Regional Resource Center (for the Texas region) was established by the Bureau for the Education of the Handicapped to support	The current year, 1976-77, is the third project year and activities fall under two general categories: • Technical assistance to the State education agency.	The Regional Resource Center is funded under a subcontract from the Texas Education Agency (SEA); the original	The Texas RRC has helped multiple-handicapped chi needed services within t years; each month, the R over 150 telephone or wr

d strategies	Status	Funding	Accomplishments
lopment program sist the class- nainstreaming the capped child gual Kindergarten is is placed upon rather than a in classroom teacher training. ctive is to develop which will reviously ual Kindergarten provide a means ng instruction ped child within	This project was funded by the Bureau of Education for the Handicapped, USOE, for a 2-year period extending from June 1, 1975, through May 31, 1977.	Fiscal year: 1975....$108,828 1976.... 118,450 Total...227,278	Development of the inforamtion manuals, *Working with Parents of Handicapped Children*, *Trabajando con los padred de ninos con Inhabilidades*, *How To Fill Your Toy Shelves Without Emptying Your Pocketbook*, and *Como llenar Sus Estantes con juguetes sin gastar mucho dinero*, has been completed. These manuals are being published by the Council for Exceptional Children (Reston, Va.) and will be available in March 1976. Development of the Spanish/English Language Performance Screening has been completed, with projected publication planned for the summer 1976. Supplementary classroom activities which include observation cards, activity cards, and action cards for use by the classroom teacher have been designed and are being tested in eight classrooms in Austin and San Antonio, Tex. The Observational Checklists for referral are being pilot tested during the 1975-76 school year in day care and kindergarten classes. Field testing of the OCR will be completed during the 1976-77 school year.
ource Center (for) was established r the Education ed to support	The current year, 1976-77, is the third project year and activities fall under two general categories: ● Technical assistance to the State education agency.	The Regional Resource Center is funded under a subcontract from the Texas Education Agency (SEA); the original	The Texas RRC has helped over 1,000 multiple-handicapped children find needed services within the last 2 years; each month, the RRC processes over 150 telephone or written

Project	Objectives and strategies	Status	Funding	Accomplishm
	pupil appraisal services in the Special Education in Texas. The mission of the center is to provide a service vehicle which can lead toward meeting the educational needs of every handicapped child in Texas by 1980. There are three broad goals which are by necessity sequentially arranged and therefore interdependent: • To develop a process that will culminate in a comprehensive individual student-need profile for every exceptional child. • To develop a comprehensive educational program for each exceptional child based on the individual student-need profile. • To develop a process of implementation which will coordinate all available resources to meet the educational needs of each exceptional child as described by the profile and subsequent program developed from that profile.	regional education service centers, and local education agencies regarding best practices; states of the art; policy and legal interpretations; and implementation of pupil-appraisal techniques. • Service on a zero-reject basis, of referrals characterized as complex; rare and inexplicable cases of handicapped pupils where all known local and regional resources have been exhausted.	funding source for the project is BEH. Fiscal year: 1974..$121,839 (*3%) 1975...371,873 (*11%) 1976...396,298 (*12%) Total..890,010 *Percent of institutional total.	requests. In addition, has provided over 12,0 of training to special personnel in over 90 w training conferences i The professional staff have also developed an a software package tha a computerized listing 1,400 sources of servi assistance in Texas fo individuals. The syste updated through a comp mation network located tion service centers i research studies have by the RRC: • Individualized Pro the Severely Multip Jeannette Walker a Technical Report N June 1975. • Pupil Appraisal 197 A Delphi Study. He and others, Technic No. 2, SEDL, March
Management Improvement Project	SEDL has provided the affirmative action office of Virginia State College with the following types of technical assistance: • A review of experience that some other institutions have	The Management Information project is currently in its second year.	Funding is from Virginia State College as follows: Fiscal year: 1974...$54,240 1975... 11,045 Total..65,285	The project will be com June 30, 1976.

nd strategies	Status	Funding	Accomplishments
l services in the ion in Texas. The center is to provide cle which can lead the educational handicapped child 80. There are three ich are by necessity rranged and therefore : a process that will in a comprehensive student-need pro- very exceptional a comprehensive program for each child based on ual student-need a process of ion which will all available o meet the educa- s of each excep- d as described by and subsequent eloped from that	regional education service centers, and local education agencies regarding best practices; states of the art; policy and legal interpretations; and implementation of pupil-appraisal techniques. • Service on a zero-reject basis, of referrals characterized as complex; rare and inexplicable cases of handicapped pupils where all known local and regional resources have been exhausted.	funding source for the project is BEH. Fiscal year: 1974..$121,839 (*3%) 1975...371,873 (*11%) 1976...396,298 (*12%) Total..890,010 *Percent of institutional total.	requests. In addition, the RRC has provided over 12,000 man-hours of training to special education personnel in over 90 workshops and training conferences in the State. The professional staff of the RRC have also developed and implemented a software package that contains a computerized listing of over 1,400 sources of services and assistance in Texas for handicapped individuals. The system is regularly updated through a computerized information network located in 20 education service centers in Texas. Two research studies have been published by the RRC: • Individualized Programing for the Severely Multiple Handicapped Jeannette Walker and others, Technical Report No. 1, SEDL, June 1975. • Pupil Appraisal 1975 to 1990: A Delphi Study. Henry Morrow and others, Technical Report No. 2, SEDL, March 1976.
ed the affirmative f Virginia State e following types sistance: experience that nstitutions have	The Management Information project is currently in its second year.	Funding is from Virginia State College as follows: Fiscal year: 1974...$54,240 1975... 11,045 Total..65,285	The project will be completed by June 30, 1976.

Project	Objectives and strategies	Status	Funding	Accomplishments
	had with affirmative action requirements. - An exemplary computerized information system developed to meet the requirements of Equal Employment Opportunity Commission (EEOC) reporting. There are three critical focuses for an Affirmative Action Information System: (1) Required reports to the EEOC, (2) EEOC-required procedures, and (3) EEOC-required documentation. Examples of activities under this contract include the following: - Conduct an analysis and prepare a report on the current availability of data which are required in EEOC reports. - Design procedures for gathering additional data required for EEOC reports. - Develop and pilot test affirmative action information file.			
Working Papers in Sociolinguistics	The principal objective of the working-papers series is to solicit, review, print, and distribute professional papers in the field of sociolinguistics. The series is made available without charge to scholars and students in the field. Under the direction of two SEDL staff associate members, preliminary	The working papers are in their second year.	The funding agency is the Social Science Research Council and the project has been funded for 2 years at $14,000. The project will conclude October 30, 1976.	In 1975-76 the papers we to a membership of 550 i and 34 foreign countries has published 13 working

strategies	Status	Funding	Accomplishments
rmative action computerized ystem developed equirements of ent Opportunity EOC) reporting. ritical focuses e Action Infor- (1) Required re- , (2) EEOC- es, and (3) EEOC- ation. Examples er this contract wing: alysis and prepare he current of data which in EEOC reports. dures for gathering ata required for . pilot test ction information			
jective of the eries is to print, and ssional papers sociolinguistics. de available o scholars and field. Under the SEDL staff s, preliminary	The working papers are in their second year.	The funding agency is the Social Science Research Council and the project has been funded for 2 years at $14,000. The project will conclude October 30, 1976.	In 1975-76 the papers were mailed to a membership of 550 in 39 States and 34 foreign countries. SEDL has published 13 working papers.

Project	Objectives and strategies	Status	Funding	Accompli
	working papers in sociolinguistics are solicited and advanced graduate students in universities reviewed, and if accepted, are issued by SEDL and mailed to a reading membership.			
Project Echo	The project has two principal objectives: To field test, evaluate, and revise supplementary curriculum designed for 15-year-old language and learning disabled students, and to test and evaluate dissemination/replication strategies.	The project began in 1974 and will conclude June 30, 1976.	SEDL is funded under a subcontract from the Education Service Center XII in Waco, Tex.; the Service Center and the Texas Education Agency are the prime contraccors under a grant from the Bureau of Education for the Handicapped. Funding has been as follows: Fiscal year: 1974....$75,000 1975.... 78,760 Total..153,760	During 1975-76, Project complete field testing of 30 curriculum packag designed for 15-year-ol with language and learn ties (L/LD). These 30 called minimodules—hav as supplementary classr in three content areas: language arts, and scie minimodules are used wi additional components: management system and a appraisal system for id potential users. Echo materials are presently in five school district and are being evaluated potential national use
Television Series for Mexican American High School Students	The broad objective of this project is to develop 1 pilot program and 10 subsequent programs in a television series designed to reduce minority isolation in desegregated schools and to specifically direct the programs toward Mexican American teenagers.	Design and production of the 30-minute pilot program was completed in February 1976; the program was evaluated in Texas, New Mexico, and Arizona during March. Production of the 10-part series, entitled "La Esquina," is now in progress.	The project is funded by the U.S. Office of Education under ESAA Regional Educational Television program funds in the amount of $249,999 (fiscal year 1976).	By December 31, 1976, t will have produced 10 t programs in a series to available to public tel

ives and strategies	Status	Funding	Accomplishments
pers in sociolinguistics ted and advanced graduate n universities reviewed, epted, are issued by iled to a reading			
has two principal To field test, nd revise supplementary designed for 15-year-old d learning disabled nd to test and evaluate on/replication strate-	The project began in 1974 and will conclude June 30, 1976.	SEDL is funded under a subcontract from the Education Service Center XII in Waco, Tex.; the Service Center and the Texas Education Agency are the prime contractors under a grant from the Bureau of Education for the Handicapped. Funding has been as follows: Fiscal year: 1974....$75,000 1975.... 78,760 Total..153,760	During 1975-76, Project Echo will complete field testing and revision of 30 curriculum packages specially designed for 15-year-old students with language and learning disabilities (L/LD). These 30 packages—called minimodules—have been prepared as supplementary classroom materials in three content areas: Mathematics, language arts, and science. The minimodules are used with two additional components: A classroom management system and a screening/appraisal system for identifying potential users. Echo curriculum materials are presently being used in five school districts in Texas and are being evaluated by SEDL for potential national use by BEH.
jective of this project p 1 pilot program and t programs in a eries designed to ity isolation in schools and to direct the programs an American teenagers.	Design and production of the 30-minute pilot program was completed in February 1976; the program was evaluated in Texas, New Mexico, and Arizona during March. Production of the 10-part series, entitled "La Esquina," is now in progress.	The project is funded by the U.S. Office of Education under ESAA Regional Educational Television program funds in the amount of $249,999 (fiscal year 1976).	By December 31, 1976, the project will have produced 10 television programs in a series to be made available to public television.

Project	Objectives and strategies	Status	Funding	Accomplishmen
	The series will attempt to show that many problematic situations might be averted and resolved. Anglos, blacks, and Chicanos would understand that they operate in different "contexts" or "rhythms" and that interaction/action/reaction/decisionmaking would all be facilitated if they anticipated and respected these differences. The series will be available for broadcast over public television.			
Bilingual/Bicultural Demonstration Project	Project objectives include: (1) To train administrative and instructional staff in three alternative bilingual/bicultural instructioal approaches, (2) to provide technical assistance in accomplishing the effective administration of the bilingual/bicultural project, and (3) to assess the first-year effectiveness of the three alternative bilingual/bicultural approaches to bilingual instruction. (Assessment is anticipated to be made throughout a 4-year period.) The SEDL project staff has initiated the development of teacher training modules to be used in inservice training. These modules delineate the three distinct approaches (behaviorist, eclectic, child centered) to the Northside ISD Bilingual/Bicultural Demonstration project.	The NISD Bilingual/Bicultural Research project completed its first year during the 1974-75 school year. The project is scheduled for completion June 30, 1976, although application has been made for continued funding.	SEDL is a subcontract to the Northside Independent School District; funds for the project are from title VII, ESAA. The SEDL subcontract is $164,060.	The evaluation of the activities has not yet completed. Orientatio provided to the three that are being impleme baseline data on stude collected.

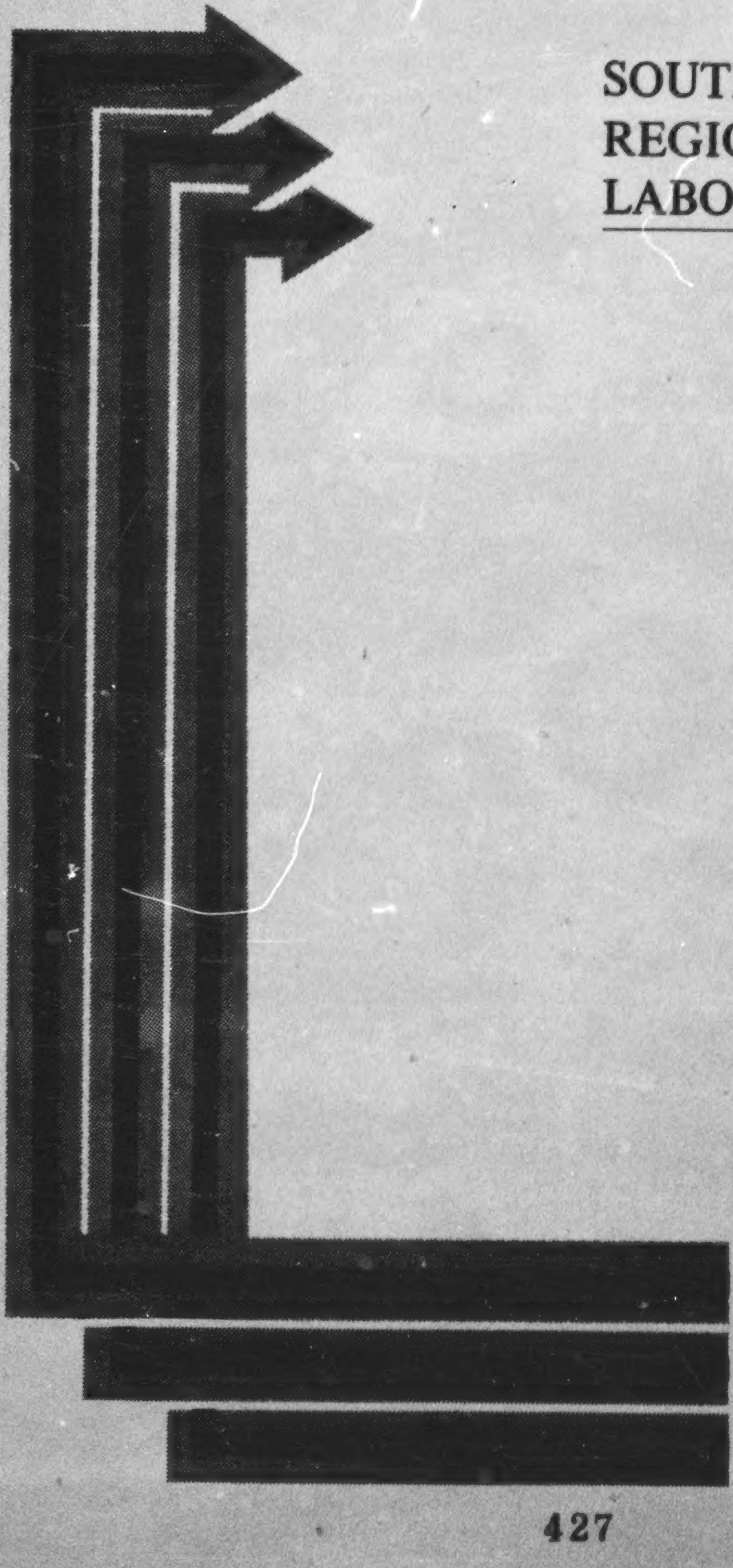
and strategies	Status	Funding	Accomplishments
ll attempt to show blematic situations rted and resolved. s, and Chicanos and that they operate "contexts" or that interaction/ on/decisionmaking facilitated if ted and respected nces. The series will for broadcast over sion.			
ctives include: administrative and staff in three bilingual/bicultural approaches, (2) to ical assistance in the effective on of the bilingual/ roject, and (3) to irst-year effectiveness alternative bilingual/ pproaches to bilingual (Assessment is to be made throughout iod.) The SEDL project itiated the development raining modules to be rvice training. s delineate the ct approaches (behav- ctic, child centered) side ISD Bilingual/ Demonstration project.	The NISD Bilingual/Bicultural Research project completed its first year during the 1974-75 school year. The project is scheduled for completion June 30, 1976, although application has been made for continued funding.	SEDL is a subcontract to the Northside Independent School District; funds for the project are from title VII, ESAA. The SEDL subcontract is $164,060.	The evaluation of the project activities has not yet been completed. Orientation has been provided to the three approaches that are being implemented and baseline data on student achievement collected.

Project	Objectives and strategies	Status	Funding	Accomplish
	The staff is currently developing a teacher-needs assessment survey in order to better meet the needs of Northside ISD teachers and teacher assistants working with the project. They are conducting onsite (by campus) continuous inservice training for teachers and for teacher assistants in project management and implementation is being provided to Northside ISD administrative staff. Teachers and students included in the Northside ISD project are in grade levels kindergarten through grade 3.			
Austin ISD ESAA Project Self	The purpose of Project Self is to work cooperatively with the Austin Independent School District in order to increase the average daily attendance of approximately 270 students in Johnston High School, Allan Junior High School, and Martin Junior High School. The project has three components: Instructing target students, the orientation of the students' teachers, and the involvement and orientation of the students' parents. The thrust of the student-training component is to develop student skills in self-management, self-motivation, and interpersonal communication.	The project was funded July 1, 1975, through June 30, 1976.	The project is funded under the Emergency School Aid Act (ESAA) by USOE for $63,186 (fiscal year 1976).	Home visits have been instructors in order t support. An advisory consisting of 45 person community, civic organ administrators, and stu the project. Attendance and academic are the basis for measu effectiveness of the pr they are the most objec of evaluation. The eva project activities have completed.

es and strategies	Status	Funding	Accomplishments
s currently developing eeds assesament survey better meet the needs ISD teachers and istants working with . They are conducting ampus) continuous raining for teachers her assistants in gement and implemen- ing provided to D administrative hers and students the Northside ISD in grade levels through grade 3.			
of Project Self is to tively with the Austin School District in rease the average ance of approximately in Johnston High n Junior High School, unior High School. has three components: target students, the of the students' d the involvement and of the students' thrust of the ing component is to nt skills in self- elf-motivation, onal communication.	The project was funded July 1, 1975, through June 30, 1976.	The project is funded under the Emergency School Aid Act (ESAA) by USOE for $63,186 (fiscal year 1976).	Home visits have been made by the instructors in order to gain parental support. An advisory committee consisting of 45 persons from the community, civic organizations, administrators, and students serves the project. Attendance and academic improvement are the basis for measuring the effectiveness of the program because they are the most objective means of evaluation. The evaluating project activities have not been completed.

Project	Objectives and strategies	Status	Funding	Accomplishments
	The thrust of the staff orientation component is to inform the teacher of skills being taught to the low ADA students. The thrust of the parent orientation and involvement component is to orient parents to what their children are being taught and involve them with their children and the total school environment.			
Indian Day Care Center Standards	The objective of this project is to develop day care standards and regulations designed for application on Indian reservations throughout the United States. Federally recognized Indian reservations are exempt from State requirements on day care licensing. There are presently no existing regulations to qualify either vehicles or physical plants for licenses which would meet the model standards for day care licensing as proposed in DHEW publication, "Guides for Day Care Licensing," or other requirements of existing Federal day care programs. This project will assess the existing state of licensing on reservations, survey the needs as indicated by tribe, and coordinate with the Bureau of Indian Affairs and the Indian Health Service in the development of model codes for tribal adoption.	Work on this project was completed April 30, 1976.	This project is funded under a grant from the Office of Child Development, HEW, for $38,543.	A task force, including and IHS, was formed and develop day care standar regulations. Pilot test ducted at five sites in Arizona, Washington, an Dakota. There will be care center standards for Indian reservations for adoption.

strategies	Status	Funding	Accomplishments
staff orientation nform the teacher aught to the low e thrust of the n and involvement rient parents to en are being e them with their total school			
this project is re standards designed for ndian reservations nited States. ized Indian exempt from State day care licensing. tly no existing ualify either ical plants for ould meet the for day care posed in DHEW ides for Day Care ther requirements ral day care project will ing state of ervations, survey icated by tribe, ith the Bureau s and the Indian n the development or tribal adoption.	Work on this project was completed April 30, 1976.	This project is funded under a grant from the Office of Child Development, HEW, for $38,543.	A task force, including staff of BIA, and IHS, was formed and met to develop day care standards and regulations. Pilot testing was conducted at five sites in New Mexico, Arizona, Washington, and North Dakota. There will be a set of day care center standards and regulations for Indian reservations to consider for adoption.



SOUTHWEST REGIONAL LABORATORY

Richard Schutz, Executive Director

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Los Alamitos, California 90720

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SWRL EDUCATIONAL RESEARCH AND DEVELOPMENT

Mission

The mission of SWRL is to carry out programmatic research and development in education designed to accomplish two general outcomes: (1) Produce a technology providing replicable systematic procedures for converting the results of research into useful educational materials and procedures; and (2) develop research-based, quality-verified instructional systems, and accompanying support systems required for their use in the Nation's schools. Whenever possible, SWRL limits its operations to R. & D. activities that advance the state of the art.

Over the past 10 years, SWRL has been engaged in constructing, demonstrating, and documenting advances in educational development technology. It is being transferred to the schools in the form of quality-verified instructional product systems; to the private sector by technical assistance in the transfer of the developed materials and procedures to schools through publishers' editorial, manufacturing, and marketing staffs; and to the governmental and scholarly communities by publications, ERIC, presentations at professional meetings, and distribution of SWRL documentation. In addition, SWRL products enable the schools to reliably produce important instructional outcomes within the time and cost designated, credit their instructional accomplishments for all interested audiences, identify deficiencies of individuals before they become serious instructional problems, and plan instructional modifications based on the interpreted information.

SWRL's general program strategy is to direct its R. & D. activities toward research which, when combined with existing knowledge, will permit the creation of new and useful educational products and system configurations. SWRL treats development as a process of reducing uncertainty regarding the efforts required to achieve prespecified outcomes. SWRL development proceeds by allocating and reallocating efforts among different uncertainty-reducing possibilities, as activities are completed and knowledge accumulates.

SWRL's present capacity and expertise for future work can be summarized categorically in terms of the following 10 areas: (1) Interdisciplinary research, (2) programmatic R. & D., (3) educational product development, (4) training/installation system development, (5) quality-assurance system development, (6) media-based R. & D., (7) computer applications, (8) R. & D.

management, (9) postdoctoral and internship training, and (10) technical assistance for large-scale R. & D. The present program areas in communication skills, interactive systems, basic skills in bilingual/bicultural education, basic skills in fine arts, and instructional product selection constitute promising growth areas for programmatic R. & D. for which SWRL has had much experience.

Governance

SWRL is a joint-powers agency created in 1966 by the regents and trustees of the universities and colleges and the State boards of education in Arizona, California, and Nevada. All of these institutions are empowered by law to engage in educational R. & D. However, they became signatories to the Joint Powers Agreement because of their conviction that many aspects of education can be adequately addressed only by an institution totally dedicated to R. & D. in education. SWRL is under the control of a board of directors composed of 18 members, 12 appointed by the signatory members and 6 by the board of directors. Although SWRL's governance is drawn from three Southwestern States, its operations are national in scale, scope, and service. The full board meets at least four times a year, twice in California and once in Arizona and Nevada. In addition, standing and ad hoc board committees hold additional meetings with the director and his staff on specific matters when so directed by the chairman of the board.

A technical advisory panel is appointed by the executive director with the advice and approval of the board of directors for each program area for which SWRL assumes contractual responsibility. Each panel includes distinguished scholars and professional leaders with national recognition and stature in the program area. These select advisers operate individually and collectively to consult and react concerning major features of the R. & D. as it progresses.

Management

SWRL has progressed through the several stages of maturity typical of R. & D. organizations and now has a matrix structure The matrix structure incorporates the strongest features of both functional and project organizations while avoiding most of their weaknesses. The laboratory directorate is responsible to the board of directors for planning, evaluation, and

board of directors. Its membership consists of an executive director; director, planning and program; director, administration and general counsel; and director, operations and liaison. Their functional responsibilities are generally described by their titles. Long-range plans are prepared by the directorate in the form of 5-year program plans approved by the board of directors. More specific plans are in the form of proposals prepared by the staff and approved by the directorate and submitted to funding agencies as a basis for financial support. "Fine grained" planning is in the form of both schedules and reports prepared by work-unit staff in conjunction with program-area coordinators.

The functional dimension of SWRL's matrix structure is defined by its four divisions. The product-design division conducts directed research activities to generate specific information related to aspects of products being developed by SWRL and to qualities that should be reflected in their design. The product-development division conducts activities to generate instructional systems and instructional support systems. The product-integration division conducts activities to generate training systems, installation systems, quality-assurance systems, and information systems related to various SWRL instructional and instructional support systems. The division of resource services provides shared functions of a liaison, logistic, and technical nature. These support functions are influenced strongly by the research and development mission of the institution. Each division is divided into several functional capability units, each of which includes staff under the leadership of a capability-unit head.

The project dimension of SWRL's organizational structure is defined in terms of program areas. At present these include communication skills, interactive systems, basic skills in bilingual/bicultural education, basic skills in fine arts, instructional-product selection, and mathematics. For each program area, a program-area coordinator has cost, performance, and schedule responsibility for the project as set forth in a contractual statement of work which, in turn, is reflected in approved task schedules.

More specifically, program management using the matrix system at SWRL utilizes shared responsibilities between program-area coordinators (for projects operating across functional divisions) and capability-unit heads (for functionally homogeneous specialized staff and physical resources required to conduct and advance the programmatic R. & D. obligations of the program areas). Once a contracted statement of work for a program area (project) is negotiated, the program-area coordinator collaborates with appropriate capability-unit heads to prepare a set of task schedules setting forth research and development activities which, taken as a whole, will result in completion of project tasks within budget and on schedule. The director, planning and program, is responsible for approving scopes of work for sponsored R. & D. which define schedules and deliverables for the grant or contract. The director, operations and liaison, is responsible for the performance of all activities specified by the grant and contract provisions within budget and on schedule.

Evaluation at SWRL is viewed as the operational application of self-corrective mechanisms to every aspect of SWRL's processes and products. Thus, the evaluation function is neither centralized nor decentralized; it is integral to and is manifest in tangible mechanisms that permeate SWRL's operations and products. Evaluation at SWRL is interactive and iterative. Feedback loops are incorporated as checks into all facets of SWRL's R. & D. As applied to product evaluation the self-corrective mechanisms have their own resource integrity as quality-assurance systems. The QA systems are architected and implemented with the same attention and integrity devoted to other elements of the product. Each QA system provides the education community with verified workable means for crediting the accomplishments of students, teachers, schools, and school agencies in using the product. With these resources, schools may treat evaluation not as a negative threat to identify human-referenced educational problems that reflect adversely on the profession but as a positive potential for acknowledging collaborative accomplishments in education by the education profession on the behalf of the students the profession serves.

External evaluation of SWRL's R. & D. operations and outcomes is also continuous and cumulative. The technical-advisory panels, augmented by individual consultants as appropriate, regularly provide expert evaluations by critiquing products and processes and recommending improvements in the R. & D. In addition, specialists in school districts evaluate SWRL's products before they agree to their districts' participation in field tests. Moreover, once a publisher enters into contract to publish the materials, its editorial staff and consultants evaluate the materials and work with SWRL personnel to make any desirable changes. And finally, as the materials are distributed by the publishers, they are again evaluated by adoption agencies, school-district specialists, and community groups.

Staff

Programmatic R. & D. at SWRL involves interdependent, coordinated, and cumulative interdisciplinary efforts of professional/technical specialists. SWRL has recruited a multidisciplinary staff of the highest quality all of whom devote their full-time efforts to SWRL. Recruitment has drawn on national academic talent and sought individuals well grounded in a discipline and with a high degree of competence and proficiency within areas of SWRL's expertise. In addition, the members of this staff have a concern and interest in real-world problems in education and are capable of interactive team effort toward solutions. Academic discipline representation includes the specializations within education, the range of behavioral-science disciplines, art, business, computer sciences, engineering, English, information science, law, linguistics, mathematics, music, Spanish, and theater arts.

The present staff includes 73 professional staff, 2 R. & D. interns, 5 support professional staff, and 17 clerical staff assigned as shown on the chart on the following page.

Staff Development

SWRL has established a professional on-the-job training program for ethnic minorities because of the current shortage of minorities with college training in educational R. & D. It also has a nonprofessional training program for minorities in the computer, audiovisual, and clerical fields. During 1975 five persons participated in the professional program and eight in the nonprofessional with an expenditure of approximately $50,000. An educational-assistance program providing tuition support for employees working on graduate degrees or taking academic courses in SWRL's areas of interests, and a teacher-fellow program have been suspended because of lack of funds. SWRL has provided postdoctoral experiences in collaboration with universities nationally, but the current dearth of funds to academic institutions for postdoctoral work has for the most part dried up the participation.

Training Provided to Others

SWRL trains school administrators, teachers, and publisher personnel in the use of the SWRL-developed products. Normally, the training/installation system developed by SWRL for each educational product is used for this purpose. The training/installation uses local district personnel resources to conduct brief sessions for teachers and other district personnel. These sessions are conducted by district-designated individuals who have received brief training for this purpose from SWRL or the publisher of the product. The efficacy of this approach is obvious and can be illustrated by the fact that teachers in over 42,000 classes and 7,400 schools have received SWRL training without incremental R. & D. or training costs.

SWRL training systems are currently being operated by local school districts on a nationwide basis in connection with the following product systems:

Table 1. Staff discipline profile

	Product Design			Product Development			Product Integration			Resource Services			Administra Support	
	BA	MA	PhD	BA	MA	PhD	BA	MA	PhD	BA	MA	PhD	BA	MA
Anthropology/ Sociology	2	5 1		4.5 1.5	1	1	2.5	2		1			1	
Business Administration/ Public Administration										1	1		1	1
Communications/ Journalism										1	1		1	
Computer Science/ Engineering				.5	.5		.5	.5	.5	2			1	
Education Administration		.5			1									
Curriculum/ Technology					.5	1.5		1 1.5	1					
Elementary	.5			.5	1	.5	1							
Human Development		.5						1	.5					
General	1 .5			1	1.5 .5	1.5	1.5	2	1.5			.5		
Measurement/ Statistics						.5		1	2					

Upper figure indicates degrees represented.
Lower figure indicates highest degree earned.

Table 1. Staff discipline profile

	Product Design			Product Development			Product Integration			Resource Services			Administrative/ Support		
	BA	MA	PhD	BA	MA	PhD	BA	MA	PhD	BA	MA	PhD	BA	MA	PhD
opology/ iology	2	5 1		4.5 1.5	1	1	2.5	2		1			1		
ess Administration/ lic Administration										1	1		1	1	
nications/ rnalism										1	1		1		
ter Science/ ineering				.5	.5		.5	.5	.5	2			1		
tion inistration		.5			1										
culum/ hnology					.5	1.5		1 1.5	1						
ntary	.5			.5	1	.5	1								
Development		.5						1	.5						
al	1 .5			1	1.5 .5	1.5	1.5	2	1.5			.5			
rement/ tistics						.5		1	2						.5

figure indicates degrees represented.
figure indicates highest degree earned.

Table 1 continued

	Product Design			Product Development			Product Integration			Resource Services			Administ Support	
	BA	MA	PhD	BA	MA	PhD	BA	MA	PhD	BA	MA	PhD	BA	MA
Mathematics/ Sciences						1								
Psychology/ Guidance						.5			.5					1.5
English	2	.5	 .5	4.5	.5 2			1	 .5	 1				
Fine Arts	1.5	1	 1.5	4 1.5	1.5 2	 2	1			3.5	1 3	 1		
History	1			2 .5			.5						2	
Languages/ Linguistics	.5	2.5 1.5	 3.5	1.5 1	1.5	 1								
Law													1	1
Mathematics	1			.5	1		3.5			1 1	 1			
Philosophy/ Religion				.5			1.5						 1	
Psychology	2	2.5 1.5	 3	3.5	 2	 .5	2.5	 .5		1	1	 .5		.5
Physical/Natural Sciences				.5			3						1	1

Upper figure indicates degrees represented.
Lower figure indicates highest degree earned.

ntinued

	Product Design			Product Development			Product Integration			Resource Services			Administrative/ Support		
	BA	MA	PhD	BA	MA	PhD	BA	MA	PhD	BA	MA	PhD	BA	MA	PhD
hematics/ ciences						1									
chology/ uidance						.5			.5					1.5	1.5
lish	2	.5	.5	4.5	.5 2			1	.5	1					
Arts	1.5	1	1.5	4 1.5	1.5 2	2	1			3.5	1 3	1			
ory	1			2 .5			.5						2		
uages/ nguistics	.5	2.5 1.5	3.5	1.5 1	1.5	1									
													1	1	1
ematics	1			.5	1		3.5			1 1	1				
osophy/ ligion				.5			1.5						1		
ology	2	2.5 1.5	3	3.5	2	.5	2.5	.5		1	1	.5		.5	.5
ical/Natural ences				.5			3						1	1	

figure indicates degrees represented.
figure indicates highest degree earned.

- Reading program
- Composition program
- Expressive Language program
- Spelling program
- Language and Concepts for Spanish-Speaking Children
- Kindergarten program
- Art program
- Music program
- Learning mastery systems
- Proficiency verification systems

Apart from "Training Trainers" this extensive training operation requires no technical assistance from SWRL or other agencies external to the school districts.

In addition, SWRL has two formal R. & D. training programs for nonstaff, which are presently not operational because of the absence of funds. A Graduate Associate program provides the opportunity for a limited number of outstanding graduate students to obtain practical experience in programmatic R. & D. activities for a limited period during the summers. Under an intern program, the SWRL directorate, in conjunction with the intern's faculty adviser, works out the intended internship experience, which both benefits the SWRL work program and is granted course credit.

SWRL has regularly cooperated with professional associations such as the American Educational Research Association, State associations, the Association for Educational Communication and Technology, the National Council on Measurement and Evaluation, and the International Reading Association in conducting training workshops in connection with their annual meetings.

Institutional Relationships

SWRL's most direct and formal institutional relationships are through its governance structure, field tryouts, and distribution of products through the private sector. As a joint powers agency the laboratory is a formal and legal partnership of the State boards and departments of education, and the university and college regents and trustees, in Arizona, California, and Nevada, augmented to represent private research organizations, private universities and colleges, scho districts, and private industry.

Each SWRL product tryout involves a formal institutional relationship with participating school districts, memorialized by a nonexclusive licensing agreement. The participating agencies finance the direct costs of the tryouts by paying fo the production costs of materials and providing all personnel and physical resources; neither SWRL nor the sponsors of its R. & D. provides financial subsidization or other form of monetary incentives to influence the institutional relationship. SWRL's 313 field tryouts have been conducted in 672 school districts in 25 States; 42,088 classes in 7,400 schools have been involved with 995,358 participating pupils. The scope of these tryouts has required careful systematic attention to teacher training; data gathering, analysis, and reporting; and school "feedback" in order to preserve the excellent relations SWRL enjoys with schools. As for the private sector, SWRL now has exclusive licensing agreements with four major publishers for marketing and distribution of 10 of its programs. SWRL has also engaged in a 5-year joint research effort with a prominent industrial concern.

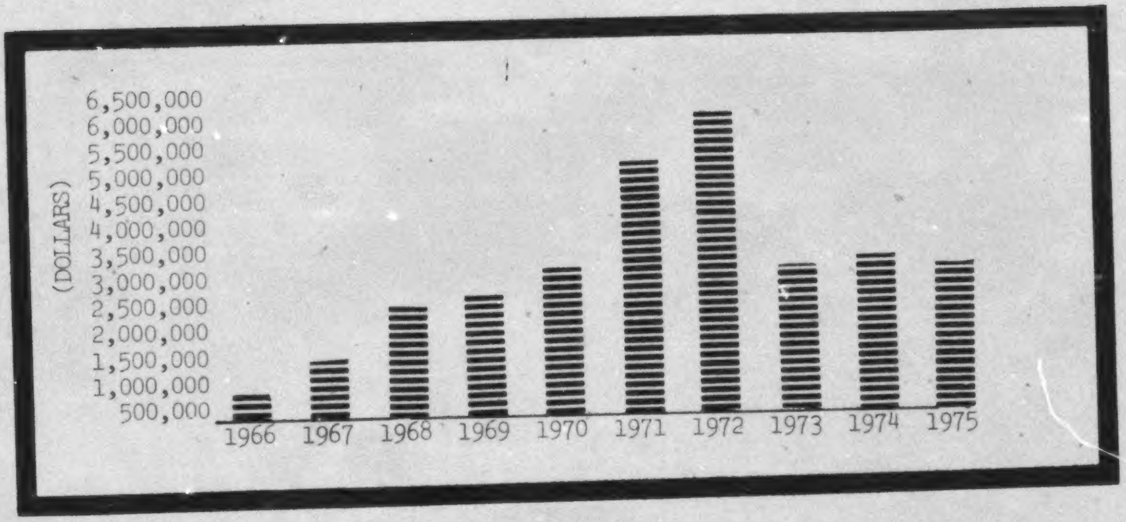
Less formal relationships are maintained by staff serving on commissions for State departments of education, and as officers, program directors, and members of professional associations.

Facilities

The 90,000-square-foot building occupied by SWRL is located near Los Angeles on a 12-acre site in Los Alamitos, and was completed in 1972. In addition to housing general R. & D. functions, the facility provides special support for educational R. & D. functions, including a computer center, television studio, graphic-arts studio, instrumentation laboratory, simulation laboratory, learning labs, film production, product-display areas, conference rooms, library, and printshop.

The Instructional Development Control and Monitoring System (DCMS) is perhaps the best example of the uniqueness and sophistication of the research-equipment systems developed and housed at SWRL. It is a computer-based system which provides a powerful mechanism allowing researchers to look intensively at teaching and/or learning performance in any segment of an instructional sequence, by collapsing time required to investigate, analyze, and vary instructional stimuli. IDCMS applications contribute to the technology for instructional research and concurrently assist development of specific instructional programs. The basic components of IDCMS include a system controller (a general-purpose digital computer), audio and video subsystems, and terminal stations.

Table 2. Funding history



CURRENT NIE PROJECTS

Project SWRL SYSTEMS FOR COMPREHENSIVE EDUCATIONAL PROGRAMS.
NIE BASIC SKILLS

Objectives and strategies. SWRL has been a single contractual effort which encompassed several R. & D. activities aimed at producing tangible products directly useful in instruction, research, testing, and implementation in various subject-matter areas and for several school-grade levels. Beginning in fiscal year 1976 SWRL will operate with separate projects funded as individual programs. This new contract stems from previous work. They are outlined below:

(1) Communication Skills program. This project began in 1972. It is focused on directed research and on developing and implementing an instructional program including reading, spelling, expressive language, and composition in grades K-6. The proposed fiscal year 1976 contract will have renewal options to November 30, 1977.

(2) Basic Skills in Bilingual/Bicultural Education. This project is a further development of an earlier program entitled: "Language and Concepts for Spanish-Speaking Children" (LCS). LCS began in 1972 and was completed in 1974. The BRISC program will deal with the development, research, testing, and implementation of a bilingual/bicultural oral language and reading program for Spanish-speaking children in grades K-6. The proposed fiscal year 1976 contract will have renewal options to November 30, 1978.

(3) Basic Skills in Fine Arts. This program began in 1973. The project aims to develop and test teacher, student and administrator materials for basic instruction in art and music in elementary schools. The teacher and student materials are being developed for nonspecialist teachers who do not have training in either area. The proposed fiscal year 1976 contract will have renewal options to November 30, 1977.

(4) Interactive Systems in Education. This program began in 1973. The project aims to develop and test systems for analyzing learning objectives and instructional materials in reading and math; to do basic research in language acquisition; to develop and test systems of performance feedback to teachers and students; and

to develop and test diagnostic systems for use by teachers and students in classrooms. The proposed fiscal year 1976 contract will have renewal options tc November 30, 1977.

(5) Instructional Product Selection program. This project began in 1973. The objective of this final year of activity will be to refine and test a package which can be used by various school personnel to identify instructional products and programs which meet their needs, evaluate the performance data on these products, and decide among products to employ. The project and funding will be completed by November 30, 1976.

Status. Status information is provided above.

Funding. The projects listed above will receive program specific funding for the first time in the life of the contract during fiscal year 1976. Prior to the current contract negotiations, SWRL received one contract allocation.

Fiscal year 1973	$2,750,000
Fiscal year 1974	3,408,364
Fiscal year 1975	2,192,000
Total	*8,350,364

*Total SWRL funding for fiscal years 1973-75. Total SWRL funding to be negotiated for fiscal year 1976 based on type "A" continuation award will be $1,715,000.

Accomplishments. This program's major accomplishments are outlined below:

(1) Communication Skills program. Kindergarden reading program with teacher, student, and school-administration materials. Used in 10 percent of American school kindergarten programs. Communication Skills program materials for teachers, students, and school administrators for grades K-3 in reading, composition, expressive language, and spelling.

(2) Basic Skills Instruction for Spanish-Speaking Children. The initial program in this series delivered a program for English language and concept development for Spanish-speaking children in elementary schools (1975).

(3) Basic Skills Instruction in the Fine Arts. This program has developed and tested curricular and teaching materials for children, teachers, and school officials in art and music for grades K-3. Prototypes of these materials are presently being used in various American public schools.

(4) Interactive Systems for Education. This program has completed a computerized instructional management system which gathers, processes, and reports on pupil instructional progress. In addition the program has completed a criterion-referenced testing program for a major commercial reading and mathematics program.

(5) Instructional Product Selection program. This project has developed and tested a packaged program for inservice staff development which aids school personnel in making decisions about instructional products under consideration for school adoption.

Monitoring history.

Dates	Project officer	Activities
1972-73	Sue Brett	September 1972, review by panels B and D when projects transferred from OE to NIE. April 1973, review of management plans by R. Hodges (University of Chicago). August 1973, site visit by W. Sullivan, N. Chalker, R. Wormwood. October 1973, site visit by Diane Reinhard.
1974-75	Robert Chesley	January 1974, site visit. Periodic phone calls and memos in 1974. March 1975, site visit with Dick Harbeck. May 1975, site visit.

Dates	Project officer	Activities
1975 to present	Jackie Jenkins, Richardo Martinez, Frank Sobol, Kent Sullivan, Martin Engel	October 1975, review of Communication Skills program by L. Smith, J. Mason, and D. Thomas. NIE participants, F. Sobol, Carl Frederiksen, J. Jenkins. October 1975, review of art and music by L. Rubin, DeVecchia, and D. Thomas. Review of Basic Skills Instruction for Spanish-Speaking Children by A. Ramirez, M. Silva (NIE), and R. Martinez (NIE). Review of interactive systems by W. Hively, A. Duncan, J. Churchill, and G. Geike (NIE). Participants, F. Sobol and Kent Sullivan. January 1976, site visit of art and music components of SWRL, Frank Sobol and Martin Engel (NIE).

Project COOPERATIVE DISSEMINATION AND LINKING AGENT TRAINING PROJECT

Objectives and strategies. This is one part of a project representing the cooperative efforts of eight labs and centers to provide more effective dissemination in the area of educational planning, management, and change support. The strategy is to describe the set of resources and to develop a system for effectively presenting the resources to linking agents.

Status. This project began in fiscal year 1976 and is expected to continue in fiscal years 1977 and 1978. SWRL has a long history in developing instructional materials and total instructional programs. As part of that activity, SWRL has developed programs and materials in two administration/management/linking areas: (1) Systems for assessing students, classrooms, schools, and programs; and (2) training for teachers and administrators in assessment of needs and selection of materials. The cooperative project activities at SWRL are lodged in the Interactive Systems project.

Funding.

Fiscal year 1976 . . . . $40,000

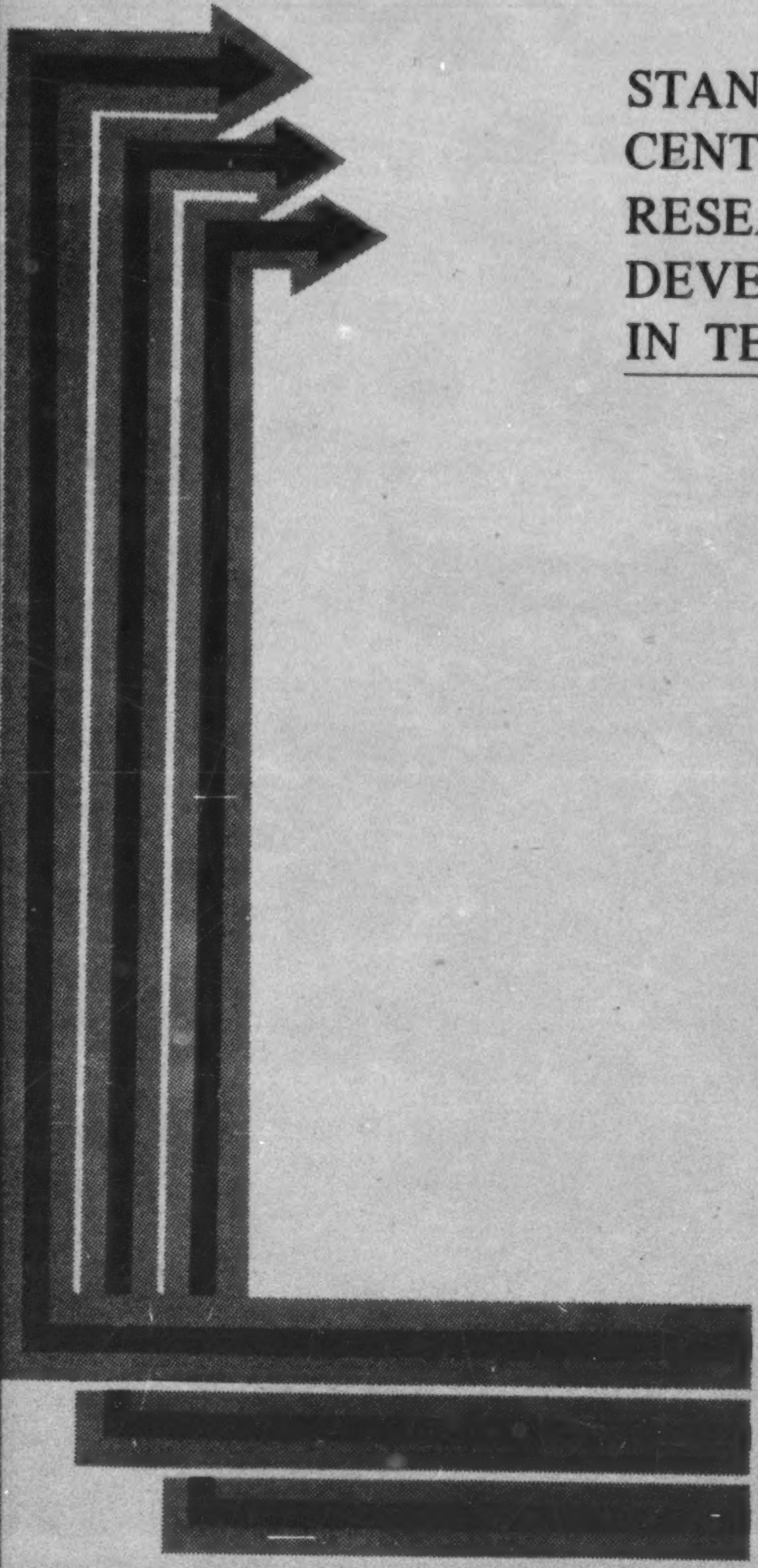
Monitoring history.

Dates	Project officer	Activities
Dec. 16, 1975	8 L/C representatives, NIE monitor, NIE staff person	Formal meeting.
Mar. 1-5, 1976	Representatives from each L/C, 2 consultants, NIE project monitor	Overview and planning meeting.

COMPLETED OR TERMINATED NIE PROJECTS

Under the single-contract arrangement, no projects have been completed, but the following activities have been:

(1) The Kindergarten Reading program.
(2) The Instructional Concepts program for preschool and kindergarten children.
(3) The Language and Concepts for Spanish-Speaking Children.
(4) Speech Articulation Kits for correcting common articulation problems of children in the primary grades.
(5) The Instructional Management System has been completed.
(6) One phase of the Learning Mastery System.
(7) Development of the Instructional Product Selection Kit. (Some testing remains.)



STANFORD CENTER FOR RESEARCH AND DEVELOPMENT IN TEACHING

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STANFORD CENTER FOR RESEARCH AND DEVELOPMENT IN TEACHING

Mission

Since its inception the mission of the center has been the improvement of teaching in American schools. In 1968 the work of the center was reorganized into three major programs, which continue to the present: Heuristic Teaching (now the program on Teaching Effectiveness); the Environment for Teaching; and Teaching Students from Low-Income Areas (succeeded by Teaching and Linguistic Pluralism). Research, development, and dissemination activities in each program have focused on teaching in elementary and secondary schools, with the exception of the now-concluded Stanford project on Academic Governance, which was a portion of the Environment for Teaching program that dealt with institutions of higher education.

In January 1973 the ERIC Clearinghouse on Educational Media and Technology became a part of the center; it now functions as the ERIC Clearinghouse on Information Resources, with expanded coverage including the field of library services. The Stanford Urban/Rural Leadership Training Institute became a part of the center in 1970. The Hoover/Stanford Teacher Corps project was initiated as part of the center on July 1, 1975, and is expected to complete the first stage of its work in September 1976. Smaller projects related to the improvement of teaching have been incorporated in a program of exploratory and related studies.

The above programs and projects have contributed directly to knowledge about and materials for use in improving teaching at various levels. Much of their output has direct implications for teacher education, both preservice and inservice, with increasing emphasis on the latter. But center staff members have always defined their task as giving particular attention to strengthening knowledge about teaching in general rather than restricting themselves to specific problems of teacher education.

Within its present definition of mission, the center has developed a degree of expertise and resources that is greater than the sum of its parts. Researchers have learned to work as teams, drawing on strengths reflecting various disciplines and areas of specialization.

Consequently, strong development and technical assistance capacities have been developed. Although the center's location within a private university has to some degree limited both funding possibilities and development of the kind of reward structure that encourages technical assistance activities in State-supported institutions, the Urban/Rural Leadership Training Institute and the Hoover/Stanford Teacher Corps project (each funded by the U.S. Office of Education) and a portion of the Environment for Teaching program are rendering direct technical assistance to educators, schools, and community members in the field.

Work now being carried out reflects the center's ability to conduct basic and applied research on teaching strategies, behaviors, and styles; teacher training (generic and curriculum-specific, preservice and inservice); student achievement of cognitive and social-emotional objectives; aptitude-treatment interactions in teaching and learning; school structure and organization, school administration, and organizational development in school systems; evaluation of teachers; methods for changing student attitudes affected by status characteistics such as race or ethnicity; procedures for improving knowledge about and the teaching of bilingual, bidialectal, and poverty-area children; community involvement; and dissemination/utilization. The extent to which the center can draw upon other existing areas of expertise at Stanford will depend in part upon decisions as to its future mission.

The attitude of SCRDT staff toward development activities has been affected by the Stanford setting. The center is part of a school of education repeatedly ranked at the top in peer-group surveys, whose scholarly activities are at the cutting edge of human knowledge. Consequently, members of the Stanford Center have emphasized the generation and dissemination of new knowledge based on empirical and analytical research and have given second priority to the development of "hands on" products.

During the last decade the center has made significant advances toward achieving its mission. Over the next few years, committed programs will continue to capitalize on the current expertise and leadership in the fields of teaching and teacher education. However, there are sources of strength in the school of education and other departments at Stanford that are not engaged in the present mission, but which could be profitably brought to bear on the Nation's pressing educational problems. Accordingly, we are now reexamining our mission, with a view toward enlarging its scope in ways that take best advantage of our collective strengths. This expansion will be neither wholesale nor indiscriminate, but will focus on selected talent that matches the urgent needs demanding attention on the educational scene.

Several new areas of emphasis figure prominently in our current discussions.

Productivity in the schools is a prime concern. Unprecedented demands for public funds, dissatisfaction with the performance of educational institutions, and increased needs for educational services all press for greater results from each dollar to be spent on education in the future. Educational finance and productivity research represents an endeavor for examining finance and productivity concerns in the educational sector in order to assess the implications of alternative methods of providing, organizing, and utilizing educational resources. Such research requires information on the consequences of present approaches as well as the implications of alternative approaches for their relative efficacies in the use of the educational resources. This research can be broken down into three relatively distinct areas in finance and three in productivity: Educational finance and social outcomes; educational finance--allocations and burdens; policy aspects of educational finance; information and evaluation of educational productivity; organizational changes for increasing educational productivity; and educational technologies and educational productivity. The products of this research will be correlated with other results obtained by the center's basic and applied research activities as described earlier.

Great emphasis is also put on productivity, instructional improvement, and organizational development in higher education. SCRDT has a unique opportunity to contribute to the improvement of instruction and the furtherance of organizational development at the higher education levels. We build here on current instructional improvement efforts in the Stanford School of Humanities and Sciences, supported by private foundations; earlier work at the center, especially by sociologists; and current expertise in organizational theory and instructional technology in the school of education and in the departments of communication, sociology, political science, and philosophy as well as in top levels of the administration in the university.

The SCRDT teaching laboratory, although suffering currently from a lack of Federal educational R. & D. funds, will provide tools for studying and improving the varied forms of postsecondary instruction.

Because the per unit cost of instruction is much greater than in the lower schools, the cost problem in postsecondary schools is especially severe. Further financial stringencies in higher education will require, if the curriculum is to remain rich, the offering of courses in areas which do not currently enroll large numbers of students but which are essential for a curriculum of the highest caliber. Production of instructional programs that can be stored and retrieved for use by individual students as a means of enriching the curriculum, adjusting the pace of instruction to individual needs, and ultimately providing a saving of highly skilled instructional time is one aim of this exploratory development.

Discussions will also focus on ethnicity and culturally pluralistic dimensions in educational institutions. Several center programs are now aimed at the areas of educational equity and ethnic and cultural pluralism. Our society has achieved improvements during the past decade, but the work has scarcely begun and remains as urgent as ever. We propose to expand our work on technical problems of achieving equity in the organization, teaching, and curriculum of the schools. We also propose to engage faculty who can help clarify the normative-philosophical questions as our Nation moves from a melting pot to a culturally pluralistic society.

We need to re-dress an imbalance of the last decade by bringing to bear the force of humanistic and artistic studies upon our inquiries, particularly as they bear upon the field of instruction. A small beginning has been made at the center, but much more could be done.

Finally, knowledge for policymaking will be a topic for discussion. "Educational policy study" is a burgeoning area of concern which aims toward understanding the basic nature of educational policy and how it is formed. Major public policies--including those in education--will always be formed partly, perhaps even largely, through political processes; that is, through the mediating of numerous competing interest groups. There is continuous debate, and there should be. But better understanding of the process of policymaking is a significant research goal. We are particularly concerned with the role of evidence, of available knowledge, in the making of policy. For instance, what is known about the effect of class size, school size, school organization, and similar variables on school effectiveness, and how does this knowledge base enter into the present policymaking as regards school financing?

We see a twofold need: (1) For a definitive identification of major educational policy decisions confronting education decisionmakers of this country (at elementary, secondary, and higher levels and at local, State, and Federal echelons) and (2) the building of a comprehensive, long-term R. & D. program designed to yield practical procedures for using the available knowledge in significant policy areas. This is, of course, a shorthand way of covering an immense topic. The beginnings of this effort may be delineated, but only the beginnings. There is a need for a much larger effort than now exists. Some of our senior and distinguished faculty in the school of education are already joining hands with their colleagues in several of the social science disciplines in policy analysis and study. We would hope that a coordinated and sustained interdisciplinary effort under the aegis of the center could bring this activity to an effective critical mass within the next few years.

From this brief enumeration of illustrative emphases, it may be noted that some, if not all, cut across several of NIE's six priority areas--as indeed, do many of the pressing problems of American education. It will be noted that they touch on the NIE priority areas of basic skills, local school problem solving, finance and productivity, and equity more than they deal with career education and dissemination.

In the future expansion of the scope of the work of the center, we aim to keep within a few areas of our special competence that bear upon urgent national needs. We welcome discussions with NIE, USOE, and others in the Federal Government as well as those in State and local governments and private foundations who may be interested in ways in which our center could be of assistance in working on these important areas of common concern.

Governance

The center is part of the Stanford University School of Education. It is headed by a director appointed by the dean of the school of education. An executive board formulates overall policies within the framework of Stanford University School of Education and Stanford University policies. Research and development associates are appointed by the director after consultation. The directors of the major SCRDT programs and projects are represented on the executive board. An administrative committee handles decisions requiring action between meetings of the board.

For a number of years a nationwide advisory panel met periodically with the entire staff. Since the establishment of NIE's program purchase policy, the programs have tended to draw advice and evaluation from ad hoc groups from outside the university who have specialized expertise in the work of each program.

Just as the center is looking toward expansion of its mission and appropriate alteration of and addition to its scope of work, so too are we considering how to modify the governance and advisory structures to match the new mission.

Management

Center planning, budgeting, evaluation, and related decisions are carried on by the director with the executive board. Administration and supporting services (methodology, instructional technology and media, and publications and dissemination) are provided on a center-wide basis; major policy decisions involving these services are referred to the executive board. The three supporting services exercise both a service- and a quality-control function; for example, all SCRDT reports are edited by the publications and dissemination unit, and major reports are also reviewed by experts not connected with the center. However, the NIE program purchase policy has encouraged a degree of decentralization with respect to evaluation, outside advice, budgeting, and related matters.

Staff

The Stanford Center employs 41 full-time staff members and 60 part-time staff members. Specifically, there are 20 professional support staff members, 20 on the clerical and secretarial staff, and 47 graduate research assistants. Currently there are 19 professional research and development associates, with another scheduled to join the center and the Stanford faculty in June 1976. Most of these R. & D. associates are members of the Stanford faculty; the portion of their time devoted to SCRDT work ranges from 15 percent to 75 percent. Two nonfaculty R. & D. associates have full-time appointments at the center. The faculty professionals represent the departments of education, art, linguistics, psychology, sociology and statistics. The areas of specialization represented among R. & D. associates include art education, community involvement, cultural pluralism, curriculum and instruction, educational organization and administration, educational psychology and sociology, higher education, linguistics, organizational and systems theory, organizational development in schools, statistics, methodology, research design, teacher education, and teaching of bilingual (Spanish-surnamed) and bidialectal children.

Staff Development

Stanford University has an extensive staff training program for personnel at all levels from clerical and secretarial through nonfaculty professionals. Many SCRDT personnel have participated in these training programs in recent years; data on the number of staff trained and the amount of funds expended on such training during fiscal year 1975 are not available at this writing.

Faculty development at SCRDT takes place within the context of the regular university program of promotion and tenure. Training for staff members outside the SCRDT context takes place largely through workshops and other field/practitioner relationships.

Training Provided to Others

Stanford's position as a private university limits the extent of its field-related training activities. Several such activities have been carried on by the center as noted in later sections. Training of minorities, women, and graduate student research assistants has been of major concern to the center since its inception. Turning first to graduate students, approximately 115 persons who have received Stanford doctorates in education or other fields have served as SCRDT research assistants. Of these, 36 have been women; 12 have been members of minority groups as that term is conventionally defined.

The above tabulation does not include the 47 current center research assistants who have not yet received their doctorates, or a sizeable number of graduate student staff members who have completed their course requirements and moved on to teaching or other positions but have not completed their dissertations. Of these latter two groups, 51 are women and 25 are members of minority groups.

Institutional Relationships

The center maintains close contact with the Far West Laboratory for Educational Research and Development, the California State Department of Education, other universities in the San Francisco Bay area, and such California-based groups as the Association of California School Administrators (ACSA). Relationships with ACSA, through the center's Environment for Teaching (EFT) program, have been particularly close; the center mounted an exhibit at the December 1975 annual meeting of ACSA and the California State Boards

Association, and several center personnel have just completed a training package titled "An Organizational Perspective on Planning and Problem Solving in Schools" for use in ACSA's Project Leadership Training program for school administrators. The monograph that makes up part of the training package is expected to receive wide distribution beyond the workshops for which the basic package is designed.

Dr. Alexander I. Law, chief, Office of Program Evaluation and Research for the California State Department of Education, serves on the SCRDT executive board. Currently in the final stages of negotiation is a contract between the California State Department and the EFT program calling for an impact evaluation of California's early childhood education program.

Contacts with the Stanford Research Institute are currently maintained through a member of the SCRDT program on Teaching Effectiveness.

Other major linking and training activities include the Hoover/Stanford Teacher Corps project and the Stanford Urban/Rural Leadership Training Institute, described in the "Current Non-NIE Projects" section.

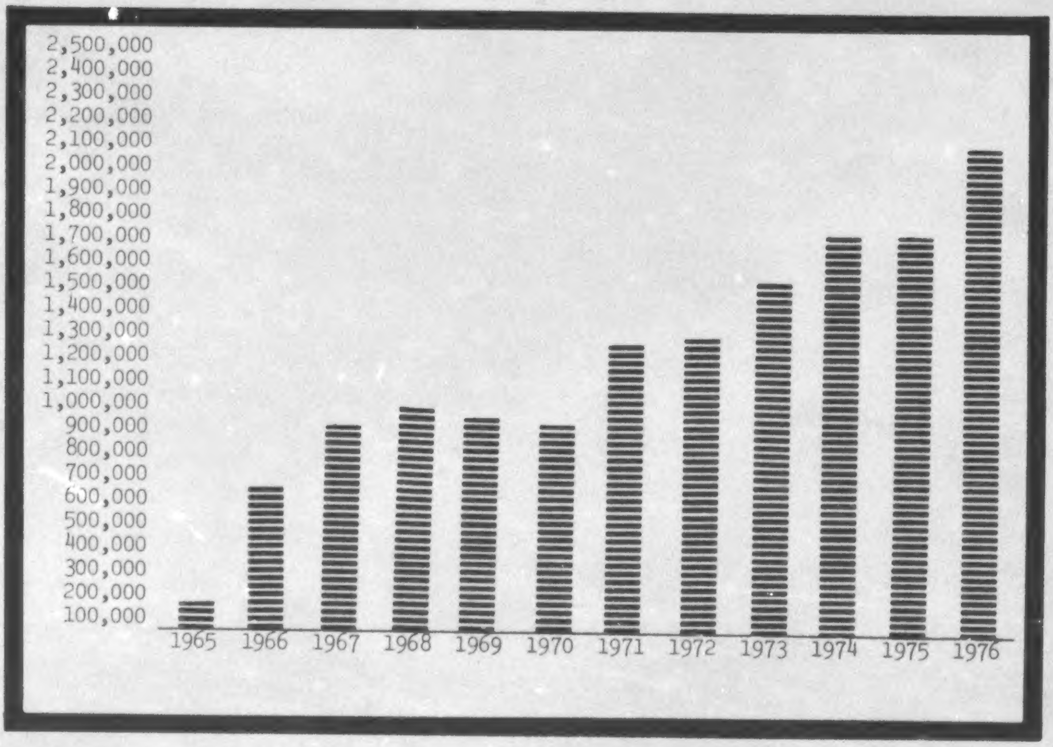
Facilities

Since 1972 the center has been housed in a building constructed with Federal funds. Centrally located on the Stanford campus, the SCRDT teaching laboratory is a tool for studying instruction in its various forms--large groups, regular classes, small groups, tutorials, and student-machine interaction. The vision behind this facility aimed toward experimental work on methods for improving the effectiveness and efficiency of university instruction, especially at Stanford. Fortunately, the building was planned flexibly for changing use so that total space is not wasted. The "flexible teaching laboratory" contains movable partitions that can be used to make different-sized classrooms, each linked to a computer and to remote-controlled television cameras for recording student-teacher interaction.

To produce training materials, the laboratory contains a film and TV studio. All these facilities are backed up by a sophisticated computerized information-retrieval system.

Because of Federal funding levels and other problems we have not been able to take full advantage of this facility's unique and potentially powerful advanced technological

Figure 1. Funding history



capacity. We intend to remedy this situation.

CURRENT NIE PROJECTS

Project TEACHING AND LINGUISTIC PLURALISM

Objectives and strategies. The program attempts to identify specific teacher attitudes, knowledge, and teaching behaviors associated with the successful teaching of bilingual/bidialectal pupils. Teacher-attitude measures, teacher tests, and classroom observations are used at various phases of the work. Pupil tests used as part of the regular evaluation process in the schools as well as instruments specifically designed by the SCRDT staff are utilized to validate hypotheses concerning effects of specific teacher characteristics on pupil achievement. The main goal of the project is to improve the education of bilingual and bidialectal children by planned intervention bringing about an increase in effective teacher behaviors.

Status. SCRDT was under contract with NIE in fiscal year 1973 for a project entitled "Program on Teaching Students from Low Income Areas." The work unit directed by Dr. Robert Politzer was separated in fiscal year 1974 from the larger project, which was discontinued, and provided support in fiscal year 1975 and fiscal year 1976. At present the project has completed language-assessment instruments for children from bilingual and bidialectal backgrounds. It is currently designing a series of tests to measure specific teacher knowledge and skills associated with successful teaching of language arts to bilingual and bidialectal students. The project is scheduled for completion in fiscal year 1978.

Accomplishments. To date the following monographs have been produced:

- A test of proficiency in black standard and nonstandard speech.
- An experiment in teaching reading to bidialectal kindergarten children.
- An error analysis of the spoken English of Mexican-American pupils in a bilingual school and a monolingual school.
- A production test in black standard and nonstandard speech.
- A pilot study of the effects of bilingual education on attitudes toward ethnic groups.

- A pilot study of the attitudes toward ethnic groups of students in monolingual schools.
- A pilot study concerning the development of a Spanish/English proficiency test.
- A revised Spanish/English grammar test.

Funding.

Fiscal year 1973	$34,249
Fiscal year 1974	83,891
Fiscal year 1975	221,487
Fiscal year 1976	343,367
Total.	682,994

Monitoring history.

Date	Project officer	Activities
March 1973 to November 1974	Eunice Turk, office of research	September 1973, site visit review, NIE staff and 2 external reviewers, Seymour Feshback and Paul Ammon. April 1974, 3 NIE staff review proposal for continuation.
December 1974 to present	Mike O'Malley, educational equity	September 1975, 2-day review, NIE staff and 3 external reviewers, Heidi Dulay, Louis Laosa, Orlando Taylor.

Project STATUS EQUALIZATION IN RACIALLY INTEGRATED CLASSROOMS

Objectives and strategies. Over the next 3 years, project personnel will take a model of status equalization developed in the laboratory and apply it to a public school setting in Berkeley, California. This will represent a unique effort to apply rigorously developed laboratory work to the integrated classroom.

Status. The study was begun in January 1976 and is expected to continue for the next 3 years.

Accomplishments. It is too early to list accomplishments at this time.

Funding.

1976	$118,000
1977	99,900
1978	99,900
Total . .	317,800

Monitoring history.

Dates	Project officer	Activities
January 1976 to present	Ray Rist, educational equity	1. Oral and written discussion over startup. 2. Site visit.

Project TEACHING STUDENTS FROM LOW-INCOME AREAS

Objectives and strategies. This project focused on a basic problem in low-income areas. There exists a cultural and socioeconomic disparity between the experiences and the concerns of the students and the community. Teachers and administrators therefore need to deal more effectively with problems of communication and motivation in the low-income-school setting.

The objectives of this study were to gain knowledge and develop training materials dealing with conditions (teacher strategies, ethnicity, desegregation, bilingual classes, group size, etc.) which affect the motivation of students in low-income schools. It also aimed at obtaining knowledge about conditions which affect teacher selection, turnover, and holding power in low-income schools.

The strategies employed included observational studies of actual classroom teaching strategies and student engagement; experimental studies of tutor-student and computer-student interaction; studies of teacher engagement and principal behavior through interviews, written instruments, and behavioral observations; studies of bilingual education involving auditory and written instruments; feedback sessions for teachers and other school personnel; and techniques for strategies for engaging students.

Status. Terminated November 30, 1974.

Accomplishments. The following technical reports have come out of this project: (1) The Impact of Changes in Selected Teacher Strategies on Expressive Student Engagement; Engaging Features of CAI Situations (Work Unit I); Student Motivation and Engagement: Classroom Settings (Work Unit II); and Student Control and Choice: Their Effects on Student Engagement in a CAI Arithmetic Task in a Low-Income School.

These R. & D. memoranda were issued: (1) "Teacher Strategies and Student Engagement in Low-Income Area Schools;" (2) "An Experiment in Teaching Reading to Bidialectal Kindergarten Children;" and (3) "An Error Analysis of the Spoken English of Mexican-American Pupils in a Bilingual School and a Monolingual School."

In addition, a paper entitled "Student Control and Choice: Their Effects Upon Disadvantaged Children's Engagement in a CAI Arithmetic Task" was presented at the 1974 American Educational Research Association meeting, and a final report on the project was prepared.

Funding.

Fiscal year 1973	$254,375
Fiscal year 1974	164,000
Total.	418,384

Monitoring history.

Dates	Project officer	Activity
March 1973 to November 1974	Eunice Turk	1. September 1973, site review by 2 NIE staff, 2 external reviewers, Drs. Seymour Feshback and Robert Guthrie. 2. January 1973, site visit, Mark Lohman, Paul Pottinger and Eunice Turk. 3. June 1973, site visit, Mark Lohman and Eunice Turk.

Project PROGRAM ON TEACHING EFFECTIVENESS

Objectives and strategies. The objectives of this program are to study existing teacher-training products and procedures and to develop others, toward the improvement of teacher behaviors and strategies and of student achievement.

The initial strategy was to carry out a comprehensive survey and analysis of existing products; and to incorporate the best of these, together with the development of new products and procedures, where necessary, into training packages in the cognitive, social-emotional, and organizational domains of teacher behavior. The unique feature was the intended integration of work in these three domains into a model teacher training system usable by teacher-training institutions across the country.

This strategy, according to both project personnel and an NIE review team, proved too ambitious. The survey turned up over 700 products, but few of these provided sufficient evaluation data to serve as a strong base for building subsystems in the 3 domains; and the distributing of staff among the 3 domains was too thin to allow for separately effective development teams.

The revised strategy was to rephrase the goal more modestly as a systematic teacher training model (STTM) collapsing the separate domains into one, while continuing some research on teacher behaviors and their effects on student learning. A more unique aspect now is the project's emphasis on experimental studies rather than correlational studies.

Status. The draft teacher training model is now being polished preparatory to sending it out for review by noted practitioners. The experimental work is being focused as a test of teaching variables tentatively identified as effective in previous correlational studies elsewhere. The project is also carrying out several supplementary analytic activities aimed toward improving the state of research in the area of teaching.

Accomplishments. Selected reports include the following:

- November 1973: Teacher Self-Improvement Through Teacher Training Products: An Experimental Course.
- December 1973: Teacher Training Products: The State of the Field.
- February 1974: A Model for Research and Development in Teaching in the Social-Emotional Domain.
- August 1974: Skills and Training in the Cognitive Domain of Teaching.
- August 1974: Teacher Perceptions of the Acceptability of Teacher Training Products.
- October 1975: Preliminary Report of a Factorially Designed Experiment on Teacher Structuring, Soliciting, and Reacting.
- March 1976: The Effects of Teacher Practice on Student Learning and Attitudes in Small Group Instruction.

Several of these have since been issued as center publications. Aside from these, approximately 12 research and development memoranda and 4 technical reports have resulted from the work of this program during NIE funding.

Funding.

Fiscal year 1973	$400,000	(12 months, including 3-month $109,250 add-on to previous USOE contract)
Fiscal year 1974	482,400	(12 months)
Fiscal year 1975	480,029	(12 months)
Fiscal year 1976	268,000	(12 months)
Fiscal year 1977	232,000	(estimated 10 months ending September 30, 1977)

Percentage of institutional funding provided through this project not available without having figures from other NIE and non-NIE programs. The total $1,630,429 actually funded through fiscal year 1976 includes $533,718 indirect funds to the university and $145,430 for R. & D. center administration. This program has received no funds in supplementary fees.

Monitoring history.

Date	Project officer	Activity
August 1972-March 1974	Mary Johnson	December 1972, completion of lab/center review by NIE master panel. April 1973, internal review of resource allocation and management plan. January 1974, site visit by Mary Johnson.
March 1974-October 1974	Sue Klein, ODR	October 1974, site visit with external reviewers: Don Ely, Ken Howey, John Craper, Ken Komoski.
November 1974 to present	Kent Viehoever	January 1975, site visit by project officer. January 1976, site visit by project officer.

Project

ENVIRONMENT FOR TEACHING PROJECT

Objectives and strategies. This project is a large-scale, longitudinal attempt to understand the relation between school organizations and classroom instruction. Survey data were collected to study the conditions under which complex and interdependent arrangements developed. A two-stage design was chosen to find out if organizationally complex schools generate more complex instruction or if more complicated instruction leads to more intricate organizational patterns. Data were gathered from 188 schools in 34 districts in the San Francisco Bay area to permit analysis of organizational and instructional features of districts, schools, teaching teams, and linkages between levels.

The major goals in the last few years have been completion of data analysis and development of designs for applying the program's perspective in reorganizing existing schools.

Status. The project has been funded by NIE since 1973. During fiscal year 1976 all unfinished deliverables as well as dissemination activites will be completed.

Accomplishments. The program's bibliography since its start includes 20 research memoranda, 12 technical reports, 4 books, 8 articles, 5 feedback reports to participating schools, and 10 other publications. A procedure for improving evaluation in schools involving colleague review has been developed, field tested, and written up in a manual. Several schools have received direct technical assistance in organizational redesign. Several hundred superintendents and principals have been trained in the application of the program's analytic concepts in workshops carried out with "Project Leadership" of the Association of California School Administrators. Several more books, reports, and development products will be completed this year.

Significant training has taken place as advanced graduate students have assumed major roles in the program. Numerous dissertations have been completed using data of the environment for teaching program.

Funding.

1973 - 1975	$1,148,718
Fiscal year 1976	294,000
Total	1,442,718

Monitoring history.

Dates	Project officer	Activities
March 1973-September 1974	Spencer Ward, office of research, program on teaching and curriculum	1. February 1973, site visit. 2. May 1973, site visit. 3. November 1973, P.I. visit to NIE. 4. February 1974, site visit. 5. March 1974, site visit, extensive correspondence.
October 1974-August 1975	Bill Spady, office of research, basic studies--program on institutional effects; later, finance and productivity group	1. November 1974, site visit.
September 1975 to present	Fritz Mulhauser, group on school capacity for problem solving	1. November 1975, visit of project leader to NIE. 2. February 1976, site visit.

CURRENT NON-NIE PROJECTS

Project HOOVER/STANFORD TEACHER CORPS PROJECT

In the fall of 1974 Stanford University's School of Education and Herbert Hoover Junior High School (San Jose Unified School District) opened discussions that led, the following spring, to their joint application for a grant from the Teacher Corps of the U.S. Office of Education. The Teacher Corps, aware of declining enrollments and shifting priorities, had recently expanded its area of concern to encompass inservice, as well as preservice, training. Stanford, too, had become aware of the fact that fewer new teachers were needed for the Nation's schools. A primary motive for its involvement was the desire to experiment with alternative ways of delivering quality inservice training to teachers who would be occupying jobs for longer periods of time.

Part of Hoover's basic interest in the project centered on a planned move to a new open-space building. Teachers and administrators wanted to make the transition as smooth as possible. In addition, they desired to explore opportunities for more bilingual education, multicultural activities, and community participation. Hoover Junior High draws on a population made up of almost 50 percent minority groups, particularly Chicanos.

The Hoover-Stanford alliance resulted in a 2-year Teacher Corps grant. The proposal included three major components: (1) An inservice program in which all members of the Hoover faculty plus the administration and aides would be involved in one or two of eight ongoing work-study teams; (2) a preservice program designed to train four teacher interns; and (3) a community component aimed at stimulating more parent participation.

The most original aspect of the Hoover-Stanford project is the work-study team. Made up of Hoover teachers and teacher aides, a research assistant (Stanford graduate student), and a Stanford faculty adviser, each of the eight teams focuses on a specific area of concern. Four deal with subject-matter areas: Language arts, social studies, physical education, and mathematics. The other four are concerned with innovative areas: Transition to open-space facilities, bilingual education, multicultural education, and community participation. The teams meet at least once every 2 weeks during an hour of released time for inservice activities. Thus, at least once every 14 days classroom teachers, aides, graduate students, teacher interns, and faculty members from Stanford come face-to-face onsite at Hoover to review current research findings (a basic objective of all eight work-study teams), plan inservice activities, develop new programs, and conduct local research studies addressed to specific school problems.

Project STANFORD URBAN/RURAL LEADERSHIP TRAINING INSTITUTE

This project, funded by the U.S. Office of Education, combines research with technical assistance to selected poverty-area schools.

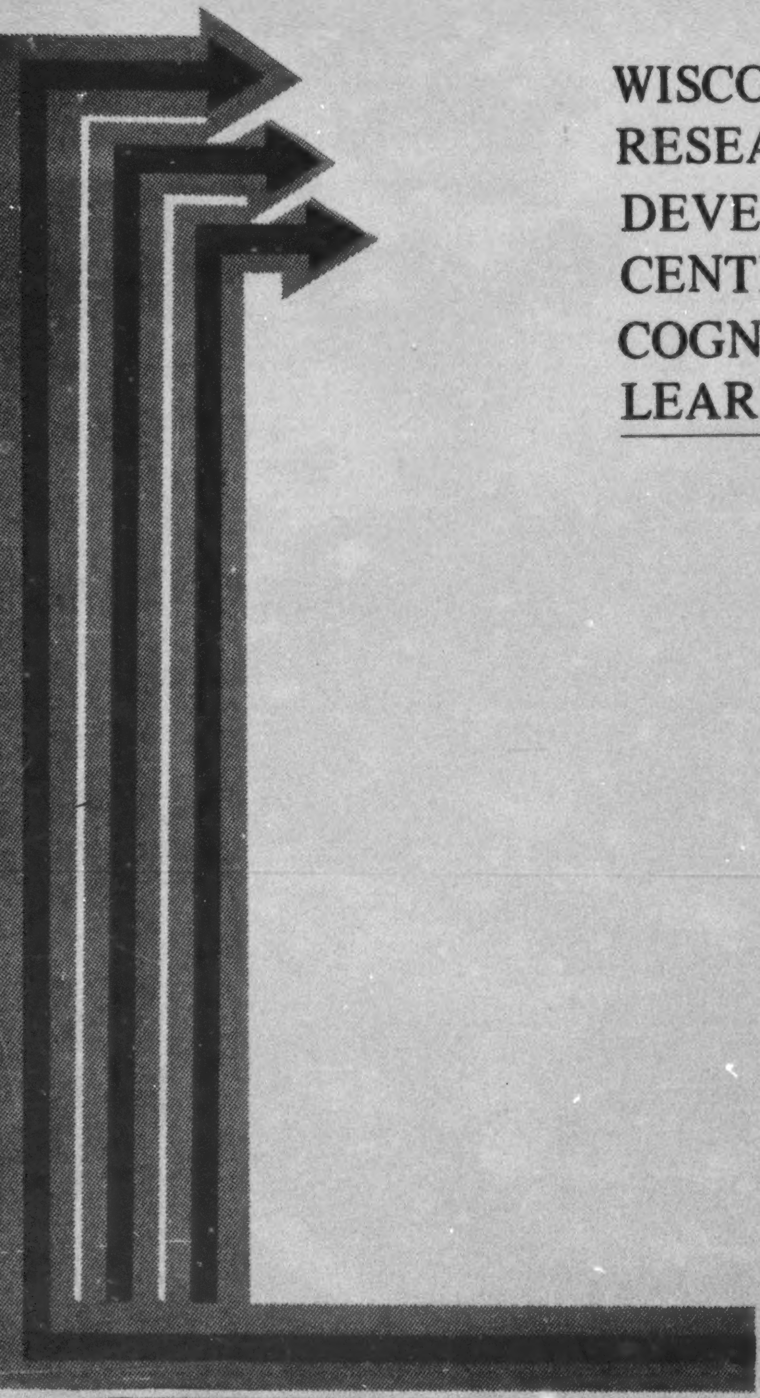
Toward this end, the Stanford Urban/Rural Leadership Training Institute (LTI) is identifying techniques of staff development, community participation, and teaching found useful in 60 schools located in 24 school districts. The 24 sites range from large cities to Appalachian, Spanish-American, and native American rural communities.

Working closely with teachers, administrators, and community members in the sites, the LTI professional staff are helping to—

- Develop school-community councils which will increase community members' understanding of and involvement in school problems and decisions;
- Train teachers, administrators, parents, and paraprofessionals in the skills needed to make their schools work;
- Sensitize the LTI staff and the school personnel to the particular characteristics and needs of their communities;
- Apply the resources of such national priority programs as Right to Read and Competency-Based Teacher Education; and
- Document and spread knowledge of promising programs developed at the sites.

Project APPLYING EDUCATIONAL CRITICISM TO EDUCATIONAL PRACTICE

This project, funded by Stanford University, is part of an attempt to apply humanistic and aesthetic criteria to questions of curriculum and instruction.



WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING

Richard Rossmiller, Director

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WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING

Mission

The mission of the Wisconsin Research and Development Center for Cognitive Learning is to improve the scope and quality of education by helping children develop as rapidly and effectively as possible their full potential as human beings and as contributing members of society. The center strives to fulfill this goal by conducting research to discover more about how children learn and develop; developing improved instructional strategies, processes, and materials for children, teachers, and school administrators; and providing assistance to educators and citizens which helps transfer the outcomes of research and development to improved practice.

The basic unifying element in the center's programmatic activities has been a concern for individual differences among children and for the implications of these differences for effective instruction. The program of Individually Guided Education (IGE) is a direct outgrowth of the center's concern for applying the processes of research, development, and dissemination/implementation to the task of individualizing instruction for children.

The objectives of the Wisconsin Research and Development Center parallel in many respects the objectives the Congress established for the National Institute of Education. However, the center has focused its efforts on the nature of individual differences and the implications of these differences for teaching and learning. Within the scope of its mission and programmatic focus, the center has sought, through its research, development, dissemination, and implementation activities to accomplish on a smaller scale the broad objectives set for NIE.

Research activities have always represented a major dimension of the center's program, serving to stimulate feasibility studies, to act as knowledge inputs to development, and to affect practices in schools.

Development activities are the logical extensions of research, developmental feasibility studies, and input from schools and other educational organizations. The importance of feedback from educators cannot be overemphasized; close contacts with participating school systems are the basis for all formative evaluations, needs analyses, and insights into alternative R. & D. approaches.

The center's implementation activities are directed not only toward the dissemination and installation of IGE materials and processes, but toward the establishment and maintenance of State IGE networks consisting of the State education agency, teacher-education institutions, and local school districts. Implementation activities are directly connected to the educational community through preparation and evaluation of staff-development materials and programs, product-awareness conferences, implementation and field test scheduling, and the application of effective institutionalization techniques.

Evaluation activities address problems associated with analysis of school-identified needs and with formative evaluation of products during development and field testing. The center is concerned that there be a comprehensive evaluation of each of its programs and products; this involves such considerations as needs assessment, marketability, effectiveness, consumer impact, and followup activities. Evaluation is an integral part of each stage in the development of a product, from specification of objectives and assessment instruments through tryouts, pilot tests, and field tests.

The above description of the center's approach to relating research, development, implementation, and evaluation traces in broad outline the relationships among these four primary functions and other involved activities and agencies. Extensive interaction occurs and enables orderly development of knowledge products and instructional/curricular programs to take place within the framework of a major programmatic theme, IGE.

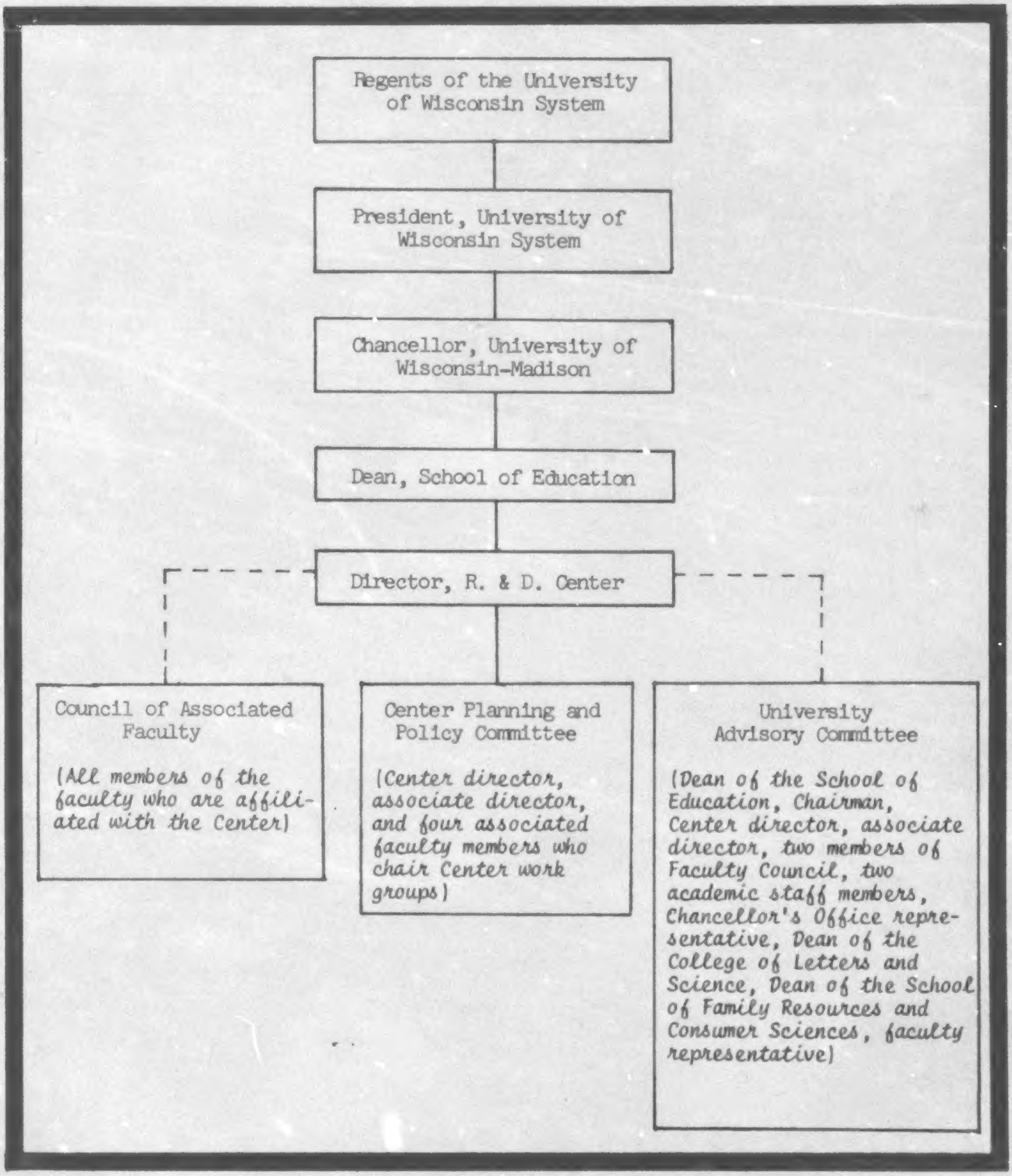
Governance

The R. & D. center is organized as a noninstructional department within the School of Education at the University of Wisconsin-Madison. The center director is appointed by and reports to the dean of the school of education and, through the dean, to the chancellor of the University of Wisconsin-Madison, the president of the University of Wisconsin system, and the regents of the University of Wisconsin system. The formal governance structure of the center is shown in figure 1.

To accomplish its mission, the center's program is organized around four broad areas of research and development activity:

- Learning and instruction in reading.

Figure 1. Governance structure


Regents of the University of Wisconsin System
President, University of Wisconsin System
Chancellor, University of Wisconsin-Madison
Dean, School of Education
Director, R. & D. Center
Council of Associated Faculty
Center Planning and Policy Committee
University Advisory Committee

(All members of the faculty who are affiliated with the Center)

(Center director, associate director, and four associated faculty members who chair Center work groups)

(Dean of the School of Education, Chairman, Center director, associate director, two members of Faculty Council, two academic staff members, Chancellor's Office representative, Dean of the College of Letters and Science, Dean of the School of Family Resources and Consumer Sciences, faculty representative)

Figure 2. Organizational structure

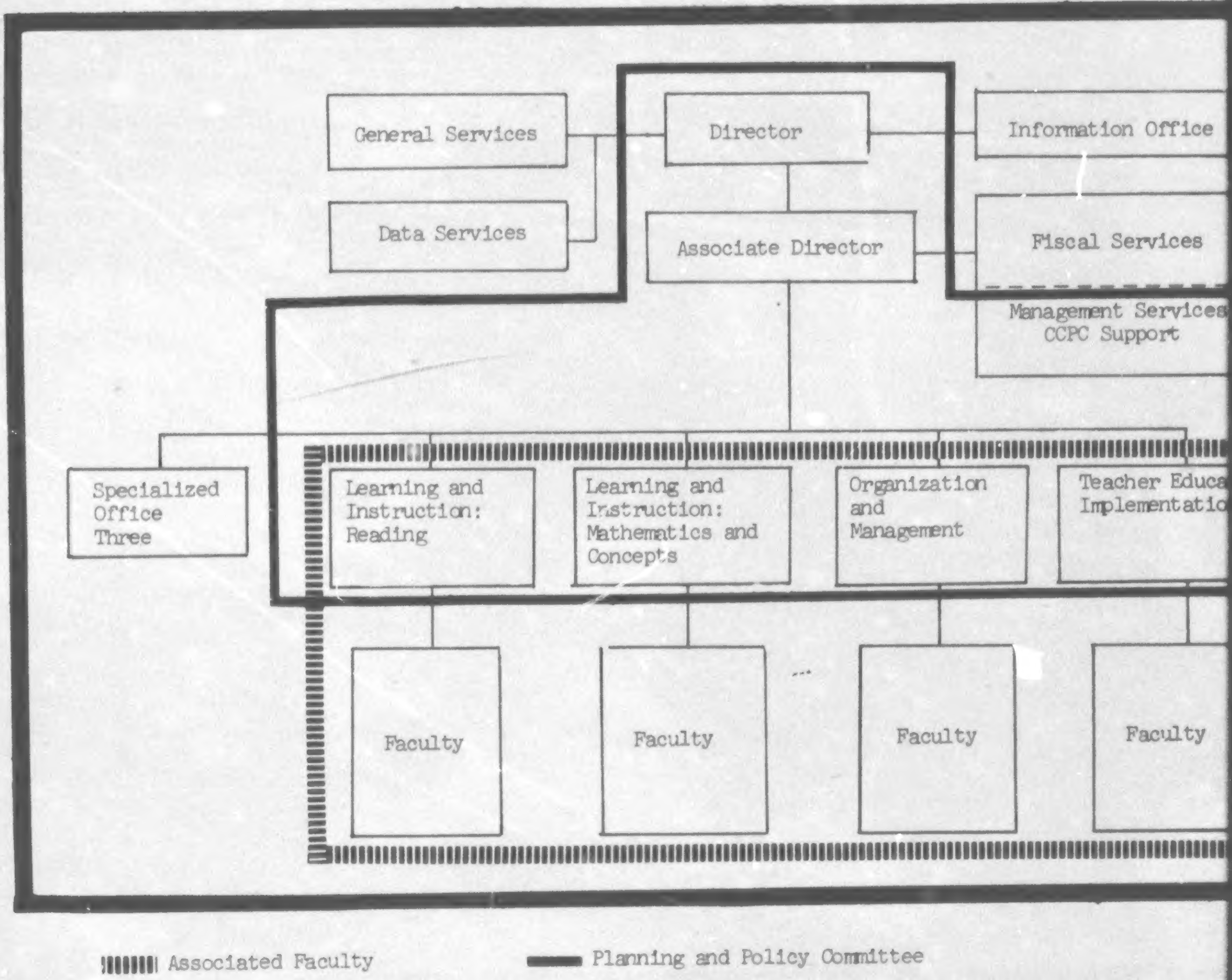
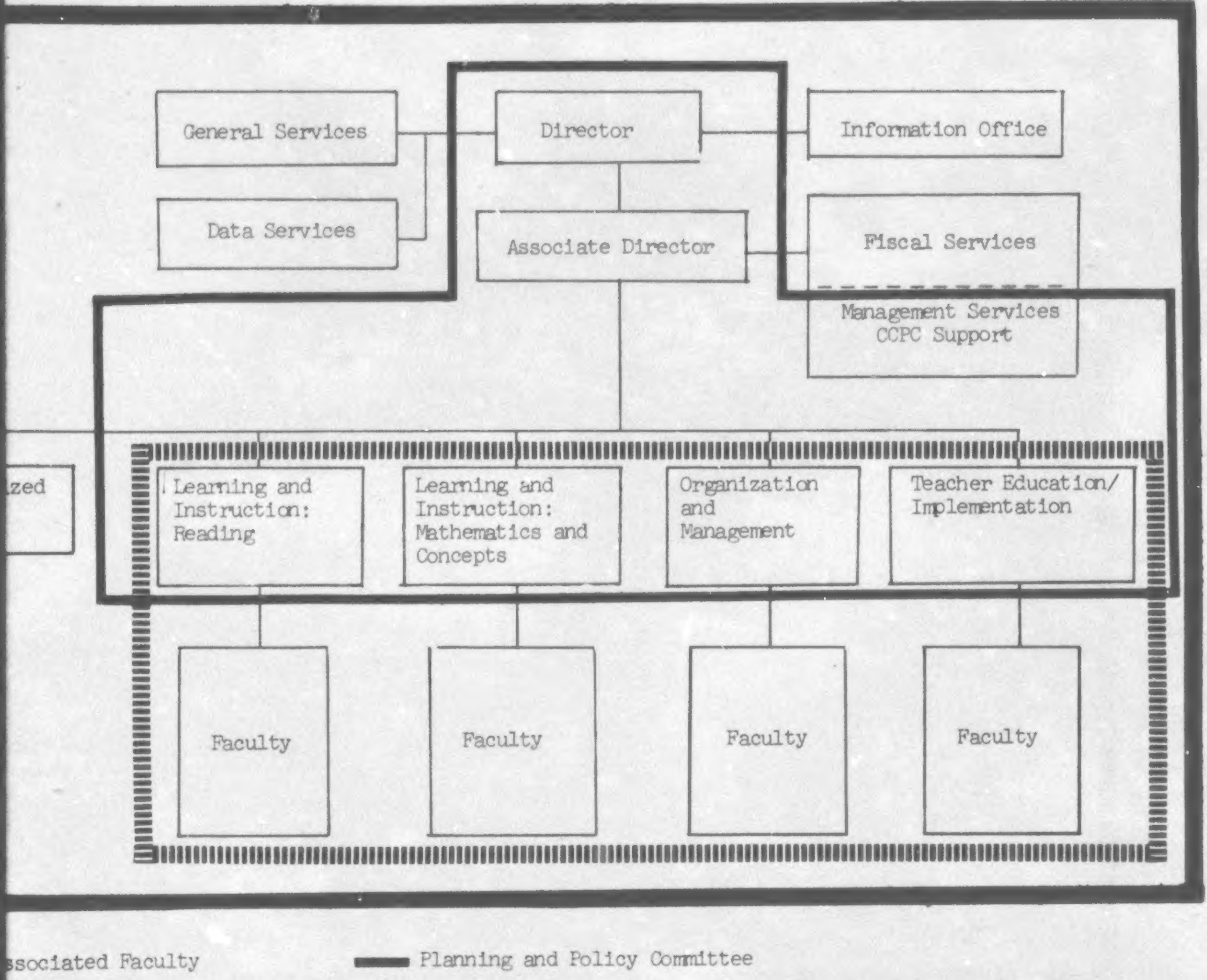

General Services
Data Services
Director
Information Office
Associate Director
Fiscal Services
Management Services
CCPC Support
Specialized Office Three
Learning and Instruction: Reading
Learning and Instruction: Mathematics and Concepts
Organization and Management
Teacher Educa
Implementatio
Faculty
Faculty
Faculty
Faculty
Associated Faculty
Planning and Policy Committee

Figure 2. Organizational structure


General Services
Data Services
Director
Information Office
Associate Director
Fiscal Services
Management Services
CCPC Support
zed
Learning and Instruction: Reading
Learning and Instruction: Mathematics and Concepts
Organization and Management
Teacher Education/ Implementation
Faculty
Faculty
Faculty
Faculty
ssociated Faculty
Planning and Policy Committee

- Learning and instruction in mathematics/concepts.
- Organization and management of schools.
- Teacher education, staff development, and implementation.

Each area is chaired by a member of the faculty of the University of Wisconsin-Madison who provides leadership in program planning, integration, and coordination. The area chairpersons are responsible for monitoring the progress of the research and development activities in their area. The four area chairpersons, together with the center director and associate director, comprise the center planning and policy committee which meets weekly and is responsible for establishing center policies and procedures with regard to program, personnel, and fiscal matters. The center planning and policy committee is responsible for overall program planning and coordination to assure that an appropriate balance is maintained among the center's activities and that the programs within the four areas are properly integrated and coordinated.

Activities within each of the four areas are directed by members of the University of Wisconsin faculty. Faculty members are supported in their research and development activities by a staff of professional employees, project and research assistants, and classified personnel. The four area chairpersons meet regularly with the faculty and staff of their unit to plan, monitor, and coordinate their efforts. Program integration, coordination, and communication among the four areas and their components are facilitated by a monthly meeting of all faculty members who are associated with the center--the council of associated faculty.

Advice and counsel to the center director is also provided by the university advisory committee which is chaired by the dean of the school of education. Its membership is shown in figure 1. The committee meets upon call by the dean of the school of education.

Policies and procedures concerning the center's operation and management are developed by the center planning and policy committee in consultation with the council of associated faculty and the university advisory committee, and within the constraints imposed by the rules and regulations of the board of regents and by Federal and State statutes and regulations.

In addition to its internal governance and advisory bodies, the center maintains a national evaluation committee which generally meets annually to review and critique progress in the center's research and development program. Members of the national evaluation committee, who serve 3-year terms, are nationally recognized scholars or practitioners chosen for their expertise and knowledge. In addition to the regular members of the committee, additional persons are invited to work with the committee as consultants to augment the expertise of the members of the committee.

Management

The center's programs are under the general supervision of the associate director. Support activities provide the following services to the center's programmatic components:

- The general services section is responsible for personnel administration, contracts administration, and facility management and also oversees mailing and shipping, conference facilities, and the center's revolving accounts (media, duplicating, and document and training services).
- The fiscal and management services section is responsible for fiscal activities (procurement, accounting, fiscal reporting, etc.) and for providing support to the center planning and policy committee in program planning and budgeting as well as in program monitoring and reporting.
- The information services section is responsible for information materials and activities.
- The data services section is responsible for electronic data processing and for the acquisition, operation, and maintenance of necessary hardware and software configurations.

Staff

The professional staff of the center is interdisciplinary in its makeup. As of April 1, 1976, it included 23 professors who are primarily responsible for the center's research and development activities. These professors are drawn from nine academic departments: Educational psychology, curriculum and instruction, educational administration, psychology, family resources and consumer sciences, child development, mathematics, computer sciences, and engineering. In addition, the center employs 69 program and project coordinators, scientists, and specialists (18 of whom hold Ph. D.'s; 29 masters' degrees; and 21 bachelors' degrees). Approximately 60 percent of the members of the center's professional staff have experience as public school teachers or administrators. Forty-one graduate students are employed part time as project and research assistants. The classified (civil service) staff numbers 42.

Training Provided to Others

To date the Wisconsin R. & D. Center has provided technical assistance to schools and other educational agencies only in relation to our programmatic efforts. Assistance in school-initiated research, development, and evaluation has been minimal. Assistance in dissemination/implementation, on the other hand, has been substantial. Our efforts in this area have been funded by both USOE and NIE and are directed toward building a national network that can provide initial support and continuing assistance to schools that wish to make the change to individually guided education. Since 1967, over 2,000 schools have made this change.

Another center activity which provides resources to other research organizations and universities involves the training of graduate students. While the center does not have a specific instructional program for graduate students, it does offer research or project assistantships to students pursuing either a master's or a doctoral degree in one of the university's instructional departments. Graduate assistants generally commit 50 percent of their time to center activities, working under the direction of a member of the associated faculty on various center activities. About 40 graduate students are currently employed at the center.

Institutional Relationships

The Wisconsin R. & D. Center has developed models and operational guidelines for structuring collaborative relationships among agencies. These relationships are more commonly referred to as the facilitative environments of IGE and are comprised of State education agencies, teacher-education institutions, intermediate education agencies (where appropriate), local school districts, and the Wisconsin R. & D. Center. These groups have been organized into State IGE networks and IGE institutes which coordinate interstate activities in four geographical regions of the United States.

There are approximately 2,000 IGE schools in 36 States. In addition to implementation of IGE in the schools, the major elements of the facilitative environments component of IGE have been initiated in the past 2½ years. State IGE networks have been established in 23 States, and 4 multistate IGE institutes have been established. (These are located at the University of Hartford, Conn.; the University of South Florida, Tampa; the University of Wisconsin-Madison; and San Jose State University, Calif.) During 1975 the R. & D. center initiated efforts to increase the implementation of IGE in urban and inner-city schools. Efforts have been focused on Washington, D.C.; New York; Detroit; and Chicago. The primary purposes of these activities are (1) to determine how the R. & D. center's implementation strategies might be modified to encourage greater implementation of IGE in urban and inner-city schools, and (2) to develop a model for coordinating IGE implementation in urban areas. Finally, since 1973, the center's implementation efforts have included emphasis on a leadership development program. In addition to working directly with schools and other agencies, efforts have been devoted to preparing personnel who will assist schools and other agencies in implementing IGE. This activity has served to increase the number of persons qualified to assist schools and thereby to increase IGE personnel resources in the State IGE networks. Another leadership development effort consists of working closely with State network coordinators and IGE institute personnel in planning and organizing IGE activities.

Facilities

The center occupies seven floors (52,000 square feet) of the UW Educational Sciences Building which provide space for office and conference areas and research laboratories. Facilities, equipment, and personnel are available to develop commercial-quality audiovisual and three-dimensional instructional materials. Facilities include a color TV production facility, sound-recording studio, photo-processing laboratory, model shop, and electrical-fabrication shop. The center has a sophisticated printshop including electrostatic images and offset presses, producing about 500,000 impressions a month.

The center's medium-scale computer configuration (Harris 6024/5) has a 1-microsecond cycle time and 195,000 bytes of core memory. The computer is online to the large-scale computing capabilities (Univac 1110) of the UW Madison Academic Computing Center for applications requiring extensive scientific computing.

Table 1. Funding history

Source	Time period	Amount	Perce
National Institute of Education.	January 1972-December 1975	$7,304,725	59.
National Science Foundation.	January 1972-August 1976	148,636	1.
Bureau of Education for the Handicapped. .	August 1974-August 1976	821,004	6.
Office of Education.	January 1972-October 1974	3,121,714	25.
Chicago School District.	August 1972-June 1973	45,000	0.
University of Wisconsin.	January 1972-June 1976	812,314	6.
Royalties:			
National Computer Systems	December 1973-January 1976	41,356	0.
Academic Press.	January 1972-December 1975	2,444	—
Rand McNally & Co.	January 1975-November 1975	14,766	0.
Encyclopaedia Britannica Educational Corp.	January 1975-December 1975	26,501	0.

Table 1. Funding history

Source	Time period	Amount	Percent
cute of Education	January 1972-December 1975	$7,304,725	59.2
ce Foundation	January 1972-August 1976	148,636	1.2
tion for the Handicapped	August 1974-August 1976	821,004	6.7
tion	January 1972-October 1974	3,121,714	25.3
District	August 1972-June 1973	45,000	0.4
isconsin	January 1972-June 1976	812,314	6.6
omputer Systems	December 1973-January 1976	41,356	0.3
ress	January 1972-December 1975	2,444	———
ly & Co.	January 1975-November 1975	14,766	0.1
dia Britannica l Corp.	January 1975-December 1975	26,501	0.2

CURRENT NIE PROJECTS

The program for the Wisconsin Research and Development Center has been a single contractual effort since 1973. The varied activities of this effort have been woven into this single contract. Beginning with fiscal year 1976, the major activities will be separated into six or seven contractual efforts. While the activities will now be individual projects, they all stem from previous work under the old arrangement. The projects proposed by the Wisconsin R. & D. Center for its forthcoming contracts are:

Project EVALUATION, REFINEMENT, AND IMPLEMENTATION PROGRAM

Objectives and strategies. The objective of this program is to provide an evaluation of individually guided education and its various components in terms of its current characteristics which will lead to further refinements of IGE, which, in turn, will increase the likelihood of successful implementation of IGE in the Nation's elementary schools. The objective will be approached through a series of R. & D. efforts studying organizational arrangements in IGE and non-IGE schools; the effectiveness and productivity of IGE schools; relationship between home, school, and community; implementation models for IGE; and staff development programs. The proposed fiscal year 1976 contract will have renewal options until December 31, 1978.

Project THE SECONDARY PROJECT

Objectives and strategies. The objective of this proposal is to formulate, develop, and adapt models for extending the organizational, instructional, curricular, home-school-community relations and other components of IGE upward to grades 7-12. Actual acceptance of this project is still under negotiation. The proposed 5-year effort will begin in January 1977. No time lines have been agreed upon. Previous exploratory work on this project was started in 1973.

Project DEVELOPING MATHEMATICAL PROCESSES

Objectives and strategies. This effort began in 1967. The objective was to develop, test, and implement curriculum and instructional materials for teachers and students in grades K-6 mathematics. The program was to have a strong emphasis on active student learning; a reliance on a measurement approach, in addition to counting; and program organization based on an interrelated set of objectives. The current proposal focuses on a 1-year contract to complete the work by December 31, 1976.

Project PREREADING SKILLS

Objectives and strategies. This program began in 1972 with the objectives of developing, testing, and implementing a kindergarten level program aimed at eliminating reading failures by equipping children with the basic skills they need before the beginning of formal reading instruction. A commercial version of the program became available in 1975. The current proposal calls for completion of the work with additional units for Spanish-speaking children. This work is to be completed by June 30, 1977.

Project WISCONSIN DESIGN FOR READING SKILL DEVELOPMENT

Objectives and strategies. Work began on this effort in 1967. The objective was to develop, test, and implement a K-6 reading-instruction program organized into six elements: Word attack, comprehension, study skills, self-directed reading, interpretive reading, and creative reading. Some elements of this effort will be commercially available by September 30, 1976. Final completion of the development is scheduled for December 31, 1976.

Project LONGITUDINAL STUDY OF CHILDREN'S CONCEPTUAL DEVELOPMENT

Objectives and strategies. The primary objective of this effort is to chart the course of conceptual development of children (K-12). Development of the ideas in the project began in 1973. The current proposal calls for a 2-year effort ending by December 31, 1977.

Project RESEARCH INTO COGNITIVE PROCESSES AND INSTRUCTIONAL STRATEGIES

Objectives and strategies. The proposal for this work focuses on four research projects: (1) Research on the behavioral consequences of certain aspects of Piaget's theory of cognitive development in an instructional setting, (2) research on teaching basic conceptualization skills in accordance with instructional programing for the individual student, (3) research on individual differences and learning from verbal and pictorial materials, and (4) research on peer and cross-age tutoring processes. Planning for these efforts began in 1972.

The current proposal calls for the work to be completed by December 31, 1976.

Funding. The projects listed above will receive separate contracts for the first time during fiscal year 1976. But these figures have not yet been negotiated. The figures listed below are total contract figures. The fiscal year 1976 figure is a type "A" continuation allocation.

Fiscal year 1973	$2,000,000
Fiscal year 1974	1,810,473
Fiscal year 1975	2,743,219
Fiscal year 1976	1,980,000
Total	8,533,692

Separate contract figures still subject to negotiations.

Accomplishments. The accomplishments of this program are as follows:

- Implementation of individually guided education in over 2,000 schools.
- K-6 developing mathematical processes curriculum and instructional materials to be published commercially by Rand McNally. (K-4 materials in use in 38 States in December 1975.)
- Kindergarten prereading skills curriculum and instructional materials published commercially by Encyclopaedia Britannica Educational Corp. in use in over 2,000 schools.

- K-6 Wisconsin design for reading skill development curriculum and instructional materials commercially published by National Computer Systems in use in over 5,000 elementary schools.
- Individually guided motivation materials for elementary school students and teachers completed and available from the Wisconsin Research and Development Center.
- Literally hundreds of research reports demonstrating the R. & D. process used to develop, test, implement, and assess the effectiveness of the Wisconsin R. & D. Center's products and programs.

Monitoring history. Given the single contract nature of the Wisconsin R. & D. Center effort, monitoring and reviewing has been across the whole contract. Once the new multiple contracts are negotiated for fiscal year 1976, the effort will have a project officer for each contract and will be reviewed separately.

Dates	Project officer	Activities
1972-74	Sue Brett	General monitoring.
August 1972	Panel D	Center program evaluation.
May 1974	P. Winnie, P. Thiemann, R. Davis	Site visit.
September 1974		Site visit.
1974-75	Nancy Yanofsky	General monitoring.
October 1974	Nancy Yanofsky, Mike Smith, Ed Esty	Site visit.
January 1975	Nancy Yanofsky, Ed Esty	Site visit.
March 1975	Nancy Yanofsky, Arthur Wise	Site visit.

Dates	Project officer	Activities
June 1975	M. Gibbons, T. Payzant, G. Hoffman, G. MacAndrews, L. Scott, J.A. Thomas, M. Shapiro	Program review and evaluation.
November 1975 to present	Noel Brennan, Ed Esty, Frank Sobal	Periodic phone calls and correspondence. Review of proposed 1976 activities.

Project COOPERATIVE DISSEMINATION AND LINKING AGENT TRAINING

Objectives and strategies. This is one part of a project representing the cooperative effort of eight labs and centers. Goals of the project are (1) to provide more effective dissemination of materials and knowledge developed by labs and centers in the area of educational planning, management, and change support; and (2) to make available coordinated materials and training resources to linking agents. Strategies to be used are (1) collecting, describing, and integrating the set of resources in a form which permits selection of useful materials; (2) orienting, training, and building a support system around the set of resources; and (3) preparing, responding to, and revising technical/conceptual papers to inform work in (1) and (2) above.

Status. This project began in fiscal year 1976 and is expected to continue in fiscal years 1977 and 1978. The Wisconsin R. & D. Center has been working with 23 States in the adoption and use of the IGE multinuit school (MUS) structure for elementary schools. In helping schools adopt MUS, the center has developed training programs and materials as well as management-support tools. It appears that these materials might be useful for other labs and centers in helping local schools and school systems to change the school structure. It also appears that materials and programs developed at other labs and centers might be effectively utilized in the MUS adoption efforts.

The cooperative project activities at the Wisconsin R. & D. Center are lodged in the evaluation, refinement, and implementation work unit.

Funding.

Fiscal year 1976 . . . . . $40,000

Accomplishments. This dissemination activity has just begun. The project expects to have staff from five or six labs and centers ("resource specialists") who can provide an orientation to the entire set of materials by June 1976. Each of those five or six labs and centers will collect a total set of the materials. The project will provide eight orientations in 1976. The Wisconsin R. & D. Center will perform a "resource specialist" function.

Monitoring history.

Dates	Project officer	Activities
Dec. 16, 1975	Representatives of 8 L/C's, NIE monitor, NIE staff person.	Formal meeting.
Mar. 1-5, 1976	Representatives from each L/C, 2 consultants, NIE monitor.	Overview and planning meeting at FWL.

Table 2. Program information

Short title and description	Type of activity	Start/[1] end	Total amount[2] of funds (in thousands of dollars)	Funds source, award t
Children's Learning and Development *provide knowledge regarding (1) cognitive learning and development, (2) validation of concept learning models and propositions, and (3) changes in sensory processing with age.	Research	1964	3,055.8	USOE (1964-72): Institut port. NIE (1973-75): Program p University of Wisconsin 75): Institutional sup
Conditions of School Learning and Instructional Strategies *provide knowledge regarding (1) optimizing programing of individualized instruction; (2) effectiveness of instructional strategies; (3) variations in content, sequence, and mode of instruction; and (4) effectiveness of peer teaching techniques.	Research	1964	2,580.3	USOE (1964-72): Institut port. NIE (1973-75): Program p University of Wisconsin 75): Institutional sup

[1] End dates are given only for activities which have been completed, or are anticipating completion this year (1976).

[2] NIE funds are given through the end of 1975 because the 1976 contract has not yet been negotiated. For the sake of consistency across activities, UW funds are also indicated through the end of 1975.

Table 2. Program information

description	Type of activity	Start/[1] end	Total amount[2] of funds (in thousands of dollars)	Funds source, award type
ng and Development regarding (1) cog- nd development, (2) cept learning models and (3) changes in g with age.	Research	1964	3,055.8	USOE (1964-72): Institutional support. NIE (1973-75): Program purchase. University of Wisconsin (1964-75): Institutional support.
ool Learning and ategies regarding (1) op- ng of individual- (2) effectiveness strategies; (3) tent, sequence, uction; and (4) peer teaching	Research	1964	2,580.3	USOE (1964-72): Institutional support. NIE (1973-75): Program purchase. University of Wisconsin (1964-75): Institutional support.

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iven only for activities which have been completed, or are anticipating completion
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iven through the end of 1975 because the 1976 contract has not yet been negotiated.
consistency across activities, UW funds are also indicated through the end of 1975.

Short title and description	Type of activity	Start/ end	Total amount of funds (in thousands of dollars)	Funds source, award typ
Prereading Skills Program *develop and evaluate a kindergarten curriculum designed to provide experience in 2 auditory and 3 visual skills that will increase reading readiness and minimize reading failures in elementary school. *investigate applicability of prereading skills program to Spanish-speaking children	Development	1971-76	503.3	USOE (1970-72): Institutio port. NIE (1973-75): Program pur University of Wisconsin (1 75): Institutional suppo
Wisconsin Design for Reading Skill Development *develop and evaluate a framework for individually guided education in reading-skill development at the elementary school level, including stated objectives, criterion-referenced assessment materials, and related management strategies; organized into word attack, study skills, comprehension, self-directed reading, interpretive reading, and creative-reading elements. *assess requirements and conduct initial development for application of design strategies to secondary-education level.	Development	1966	2,473.3	USOE (1970-72): Institutio port. NIE (1973-75): Program pur University of Wisconsin (1 75): Institutional suppo

scription	Type of activity	Start/ end	Total amount of funds (in thousands of dollars)	Funds source, award type
rogram e a kinder- esigned to in 2 auditory that will in- iness and llures in ility of ogram to ldren	Development	1971-76	503.3	USOE (1970-72): Institutional support. NIE (1973-75): Program purchase. University of Wisconsin (1970-75): Institutional support.
Reading a framework ded education elopment at l level, in- tives, assessment ed management d into word , comprehen- reading, in- and creative- and conduct for appli- ategies to level.	Development	1966	2,473.3	USOE (1970-72): Institutional support. NIE (1973-75): Program purchase. University of Wisconsin (1970-75): Institutional support.

Short title and description	Type of activity	Start/ end	Total amount of funds (in thousands of dollars)	Funds source, award typ
Organization for Instruction/ Administrative Arrangements *provide knowledge regarding (1) roles and relationships among staff of multiunit schools, (2) cost effectiveness and productivity, and (3) home-school-community relations.	Research	1971	510.0	USOE (1966-72): Instituti port. NIE (1973-75): Program pur University of Wisconsin (1 75): Institutional suppo
Developing Mathematical Processes *develop and evaluate an activities-based, individualized mathematics curriculum, consisting of 90 topics, applicable to grades K-6, including arithmetic, probability, statistics, and geometry.	Development	1967-76	2,869.4	USOE (1967-72): Institutio port. NIE (1973-75): Program pu NSF (1972-76): Program pu University of Wisconsin (1 75): Institutional suppo
Environmental Education[3] *develop and evaluate a middle-school curriculum, comprised of social studies and biological science concepts, organized according to the center's concept learning and development model, and presented in a sociohistorical context.	Development	1972-75	365.9	USOE (1970-72): Institutio port. NIE (1973-75): Program pu University of Wisconsin (1 74): Institutional supp

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[3] Eliminated as a result of funding cutbacks.

description	Type of activity	Start/ end	Total amount of funds (in thousands of dollars)	Funds source, award type
Instruction/ rrangements e regarding (1) onships among it schools, (2) ss and produc- home-school- ons.	Research	1971	510.0	USOE (1966-72): Institutional support. NIE (1973-75): Program purchase. University of Wisconsin (1966-75): Institutional support.
ematical Processes uate an activities- lized mathematics isting of 90 topics, rades K-6, includ- probability, geometry.	Development	1967-76	2,869.4	USOE (1967-72): Institutional support. NIE (1973-75): Program purchase. NSF (1972-76): Program purchase. University of Wisconsin (1967-75): Institutional support.
ducation[3] uate a middle- um, comprised of and biological s, organized ac- center's concept velopment model, n a sociohistoric-	Development	1972-75	365.9	USOE (1970-72): Institutional support. NIE (1973-75): Program purchase. University of Wisconsin (1970-74): Institutional support.

result of funding cutbacks.

Short title and description	Type of activity	Start/ end	Total amount of funds (in thousands of dollars)	Funds source, award typ
Individually Guided Motivation *develop, evaluate, and distribute a set of preservice and inservice materials and procedures, including films, textbook, and manuals incorporating principles of reinforcement, feedback, goal setting, reasoning, and modeling for use by teachers wishing to improve motivation of classroom students.	Development	1972-75	179.0	USOE (1969-72): Institutio port. NIE (1973-75): Program pur University of Wisconsin (1 74): Institutional suppo
Models for IGE/Secondary[4] *develop and evaluate a change process(es) by which principles and concepts of individually guided education can be implemented and maintained in middle, junior high, and senior high schools.	Development	1972-76	269.0	USOE (1971-72): Institutio port. NIE (1973-75): Program pur University of Wisconsin (1 75): Institutional suppo
Materials and Strategies for IGE Staff Development and Implementation *revise or develop, and evaluate, sets of print and nonprint materials used to support each	Development and Implementation	1966	2,228.4	USOE (1967-73): Institutio port. NIE (1973-75): Program pur University of Wisconsin (1 71): Institutional suppo

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[4] Being eliminated as a result of funding cutbacks.

escription	Type of activity	Start/ end	Total amount of funds (in thousands of dollars)	Funds source, award type
ed Motivation , and distribute e and inservice edures, includ- k, and manuals ciples of re- ack, goal , and modeling s wishing to of classroom	Development	1972-75	179.0	USOE (1969-72): Institutional support. NIE (1973-75): Program purchase. University of Wisconsin (1969-74): Institutional support.
ondary[4] te a change ch principles dividually an be imple- ned in middle, enior high	Development	1972-76	269.0	USOE (1971-72): Institutional support NIE (1973-75): Program purchase. University of Wisconsin (1971-75): Institutional support.
tegies for ent and and evalu- and nonprint support each	Development and Implementation	1966	2,228.4	USOE (1967-73): Institutional support. NIE (1973-75): Program purchase. University of Wisconsin (1968-71): Institutional support.

as a result of funding cutbacks.

Short title and description	Type of activity	Start/ end	Total amount of funds (in thousands of dollars)	Funds source, award typ
phase of implementation of IGE products and processes as well as for preservice applications in teacher-education institutions. *develop and evaluate implementation model to assure successful installation and maintenance of IGE products and processes. *coordinate development of IGE State networks comprising LEA's, TEI's, and SEA's. *coordinate development of multistate regional IGE centers. *support IGE product-specific implementation activities. *provide formal and informal information regarding IGE to external agencies, groups, and individuals.				
Computer Applications for IGE *develop and evaluate materials and procedures to provide instructional and administrative support to teachers and school administrators implementing IGE products and processes.	Development	1972	225.6	USOE (1972): Institutiona port. NIE (1973-75): Program pu University of Wisconsin (75): Institutional supp

le and description	Type of activity	Start/ end	Total amount of funds (in thousands of dollars	Funds source, award type
plementation of IGE prod- ocesses as well as for applications in teacher- nstitutions. evaluate implementation sure successful instal- maintenance of IGE pro- processes. development of IGE State mprising IEA's, TEI's, development of multi- nal IGE centers. product-specific im- n activities. rmal and informal in- regarding IGE to ex- ncies, groups, and .				
oplications for IGE evaluate materials res to provide in- and administrative teachers and school tors implementing IGE nd processes.	Development	1972	225.6	USOE (1972): Institutional support. NIE (1973-75): Program purchase. University of Wisconsin (1973-75): Institutional support.

Short title and description	Type of activity	Start/ end	Total amount of funds (in thousands of dollars)	Funds source, award typ
Specialized Office Three *locate, describe, evaluate, and enter into the NIMIS system information on instructional materials for handicapped children. *adapt, modify, or develop needed instructional materials for handicapped children.	Service	1974-76	821.0	USOE/BEH (1974-76): Progra chase.

description	Type of activity	Start/ end	Total amount of funds (in thousands of dollars)	Funds source, award type
e Three evaluate, and MIS system in- ructional dicapped develop need- materials for ren.	Service	1974-76	821.0	USOE/BEH (1974-76): Program purchase.

Table 3. Current non-NIE projects

Project	Objectives and strategies	Status	Funding	Accomplishme
Specialized Office Three	The provision of equal educational opportunities for all handicapped children requires the acknowledgment of several basic educational principles. First, handicapped children differ in educationally significant ways from nonhandicapped learners and, if they are to grow and develop to reach their maximal potential, they must be provided with instructional programs appropriate to the unique characteristics they manifest. Second, the identification of instructional programs which differ in direct relation and proportion to the unique characteristics of various subgroups of handicapped pupils requires the development of a logical and/or empirically based system for identifying and matching educationally relevant learner characteristics to materials characteristics. Third, the dissemination of the information on how to individualize instruction through the use of instructional materials is just as important as the identification of validated instructional materials for particular pupil groups. Specialized Office Three (S3), located at the R. & D. center and supported as part of the BEH instructional media and materials	This activity is in the 18th month of an anticipated 3-year contract.	$821,000* *Specialized Office Three was funded by the Bureau of Education for the Handicapped (USOE) as of September 1974, for a period of 1 year at a level of $321,000. Second-year continuation was funded at $500,000, with funding in the third year anticipated at approximately the same level. These funds represent 4.8 percent of the Wisconsin R. & D. Center funding.	The current thrust of the project is to materials and encode for entry into the structional material system (NIMIS). As 1973, approximately stracts had been pr submitted to NIMIS. major activity is to usage of available materials through ments designed to b use for evaluators, and users of such m

Table 3. Current non-NIE projects

and strategies	Status	Funding	Accomplishments
f equal educational or all handicapped es the acknowledg- basic educational rst, handicapped in educationally s from nonhandicapp- , if they are to p to reach their al, they must be nstructional pro- te to the unique they manifest. ntification of in- grams which differ ion and proportion haracteristics of ps of handicapped the development of r empirically based tifying and matching elevant learner to materials . Third, the dis- he information on alize instruction of instructional st as important as ion of validated in- erials for particu- s. ice Three (S3), lo- & D. center and rt of the BEH in- ia and materials	This activity is in the 18th month of an anticipated 3-year contract.	$821,000* *Specialized Office Three was funded by the Bureau of Education for the Handicapped (USOE) as of September 1974, for a period of 1 year at a level of $321,000. Second-year continuation was funded at $500,000, with funding in the third year anticipated at approximately the same level. These funds represent 4.8 percent of the Wisconsin R. & D. Center funding.	The current thrust at this stage of the project is to describe materials and encode descriptions for entry into the national instructional materials information system (NIMIS). As of April 1973, approximately 4,500 abstracts had been prepared and submitted to NIMIS. The second major activity is to recommend usage of available instructional materials through criteria documents designed to be of practical use for evaluators, developers, and users of such materials.

Project	Objectives and strategies	Status	Funding	Accomplish
	network, is concerned with improving education through providing appropriate materials for mentally retarded, specific-learning-disabled, emotionally disturbed, speech-impaired, physically handicapped and other help-impaired and multiple-handicapped learners. Each of these handicapped groups differs in educationally significant ways from the others, althoug in some instances there are characteristic likenesses. The task of the S3 Office is to identify the characteristics of those learner groups which are critical to the specification of instructional-materials requirements, to identify materials which meet these learner needs, and to evaluate the materials identified to insure that they are appropriate, effective, and practical for the learners for whom they are recommended. When no adequate materials are found, new materials are developed or extant materials are adapted to meet the needs of these handicapped groups. The educational services to be provided for the population served by S3 are effective instructional materials and organizational structures which have been specifically defined, carefully developed and thoroughly assessed for			

ectives and strategies	Status	Funding	Accomplishments
is concerned with improv- ation through providing te materials for mentally specific-learning-dis- otionally disturbed, paired, physically handi- d other help-impaired and handicapped learners. hese handicapped groups n educationally signifi- from the others, althoug nstances there are istic likenesses. The he S3 Office is to identi- aracteristics of those roups which are critical ecification of instruc- terials requirements, to aterials which meet these eeds, and to evaluate the identified to insure tha appropriate, effective, ical for the learners for are recommended. When e materials are found, ials are developed or ex- ials are adapted to meet of these handicapped ional services to be or the population served effective instructional and organizational which have been specif- ined, carefully devel- horoughly assessed for			

Project	Objectives and strategies	Status	Funding	Accomplishment
	use in meeting the needs of children with particular handicapped conditions. To provide these services, major systems are being developed and tested for the location, assessment, adaptation, and development of instructional materials. These systems utilize materials information to make recommendations for the use of particular instructional materials with handicapped children of the population served by S3 and, therefore, they are designed to be responsive to the materials needs identified by the NCEMMH and the ALRC network.			
Developing Mathematical Processess Leadership Specialist Training Program	This program supports the training of 15 college and university mathematics educators as DMP leadership specialists to engage in one or more of the following activities: (1) Establish DMP dissemination and implementation center at their college or university, (2) conduct DMP awareness conferences, (3) serve as a DMP local coordinator, (4) train DMP local coordinators, (5) work with DMP teachers and DMP local coordinators, and (6) use DMP in teaching preservice or inservice teacher-education courses. The individuals participating in the training program had previously been trained as DMP local coordinators, had worked	This activity is in the 15th month of a 20-month grant period.	$36,468* *This activity was funded by the National Science Foundation.	Fifteen DMP leadersh ists are nearing co their training.

ives and strategies	Status	Funding	Accomplishments
ting the needs of chil- particular handicapped . To provide these major systems are being and tested for the lo- sessment, adaptation, pment of instructional These systems utilize information to make rec- ons for the use of par- structional materials capped children of the served by S3 and, they are designed to be to the materials needs by the NCEMMH and the rk.			
m supports the training ge and university math- cators as DMP leader- lists to engage in one the following activi- stablish DMP dissemina- plementation center at ge or university, (2) awareness conferences, s a DMP local coordi- train DMP local coordi- work with DMP teachers al coordinators, and in teaching preservice e teacher-education he individuals partici- he training program had een trained as DMP inators, had worked	This activity is in the 15th month of a 20-month grant period.	$36,468* *This activity was funded by the National Science Foundation.	Fifteen DMP leadership specialists are nearing completion of their training.

Project	Objectives and strategies	Status	Funding	Accomplish
	with local schools in implementing DMP, and had expressed strong interest in DMP. The training includes (1) a 1-week intensive training conference, (2) planning and conducting a 3-day conference for DMP local coordinators, and (3) serving as a consultant for a DMP awareness conference.			

tives and strategies	Status	Funding	Accomplishments
schools in implementing ad expressed strong n DMP. The training in- a 1-week intensive onference, (2) planning ting a 3-day conference cal coordinators, and g as a consultant for a ess conference.			